REPORT

ON THE WORKING OF THE

DEPARTMENT OF AGRICULTURE

FOR THE YEAR

1962

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Report on the working of the Department of Agriculture for the year 1962.

DEPARTMENT OF AGRICULTURE,
93, Archbishop Street,
Valletta - Malta.

28th June, 1963.

Sir,

I have the honour to transmit to you my Report on the working of the Department of Agriculture for the calendar year 1962.

I have the honour to be,
Sir,
Your obedient servant,
V. J. CASTILLO,
Director of Agriculture.

The Honourable,
Minister of Agriculture,
Power and Communications,
VALLETTA.

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STAFF LIST OF SENIOR OFFICERS AS ON 31st DECEMBER, 1962

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Mr. Joseph Amato Gauci	Asst. Director of Agriculture
Mr. Anthony S. Farrugia, B.Sc. (Econ.), B.Com.	Administrative Officer
Mr. Calmel Libreri, D.P.A.	Higher Executive Officer
Mr. Paul Vella Bonello	Higher Executive Officer
Mr. Edgar Causon	Temp. Higher Executive Officer
Mr. Carmel Callus	Executive Officer
Mr. George Busuttil	Executive Officer

Technical Officers

Mr. Andrè Cassar, B. Sc., B. V. Sc., M.R.C.V.S.	Principal Govt. Vet. Surgeon and Director of Vet. Services
Mr. George Cousin	Supt. of Public Gardens and Plantations
Mr. John Debrincat	Senior Agricultural Officer
Mr. Joseph Frendo	Chief Fisheries Officer
Mr. Charles Galea Enriquez, B.A., M.Sc., F.R. Econ. S.	Agricultural Economist
Dr. Gerald J. Peralta, D.Sc. (Agric.), F.Z.S.	Plant Pathologist
Mr. Francis P. Portelli, B.Sc. (Hort.), B. Pharm.	Horticulturist
Mr. Louis J. Saliba, B.Sc., B. Pharm., B.Sc. (Hon.) Ent. F.R.E.S.	Plant Pathologist and Entomologist
Mr. A. Scicluna Spiteri B. Pharm. B.Sc. (Agric.), M.Sc.	Agricultural Chemist
Mr. S. J. Zammit, F.R.H.S.	Supt. of Government Farm
Mr. Edward Ebejer Slythe, C.D.D., C.D.A.	Higher Agricultural Officer
Mr. Victor T. Restall, B.Sc., M.R.C.V.S.	Asst. Government Veterinary Surgeon
Mr. Saviour P. Camilleri, C.D.A.	Agricultural Officer
Mr. Joseph Debattista, N.D.A., C.D.A., N.D. Agric. E., A.I. Agric. E.	Agricultural Officer
Mr. Clive Simpson, N.D.A., C.D.A.	Agricultural Officer
Mr. Dominic Sultana, N.D.A., C.D.A., N.C.P., C.C.P.	Agricultural Officer
Mr. Victor Rossignaud	Agricultural Marketing Officer

United Kingdom Advisers

Mr. Louis J. Littlejohn, B.Sc. (Hons.)	Chief Agricultural Advisory Officer
Mr. Godfrey G. Alton, B.Sc., M.R.C.V.S.	Veterinary Bacteriologist
Mr. Joseph G. Gillow, B.Sc., (Hort.)	Horticultural Advisory Officer
Mr. James R. Matheson, N.D.A.	Animal Husbandry Officer

I. INTRODUCTION

Ministerial Activities

Visit to Israel

A delegation headed by the Hon. Minister of Agriculture, Power and Communications visited Israel at the invitation of the Government of that country. The agricultural activities pursued there were studied by the delegation, direct contacts with the leading men responsible for the agricultural development in Israel were made and it was arranged to strengthen the existing ties with a view to enhancing the development of these Islands through missions and experts after full consultation.

Call at F.A.O. Rome

The Hon. Minister took the opportunity on his way back from Israel to call at the Food and Agriculture Organization, Rome, with a view to eventual membership.

The visit was crowned with success. A date for attending the General Conference was fixed for November, 1963. Meanwhile it was agreed that a number of experts should help develop some aspects of agricultural activities. These included the sending of experts in crops grown under glass, in veterinary diagnostic research, in Brucellosis research and viticulture.

Conference at London

The Hon. Minister secured the inclusion of the Director of Agriculture in the Mission that went to London to discuss Common Market problems following possible entry by the United Kingdom.

Water Supply to farmers

Perhaps the sorest problem in local agriculture is the shortage of water. The Hon. Minister left no stone unturned to ease the present tight situation. He found a partial solution by exploiting the water that was accumulating at disused quarries. One of these quarries was the Kirkop Quarry. Bowsers were utilized to transport the water to all such farmers as needed water badly and as a result, crops have appeared where nothing but weeds grew before.

A Water Festival was held in Żurrieq and the success was so great that it was decided to make the Festival an annual event.

II A. CAPITAL DEVELOPMENT

a) *Cattle Disease Eradication Scheme*

This scheme aims at the eradication of *Brucella abortus* and of *Bovine Tuberculosis* from the Maltese Islands, and is based on the slaughter of all infected animals, the owners being compensated by free replacement with imported pregnant heifers or by equivalent monetary compensation. Up till May 1961 the scheme progressed on a voluntary basis but in that month regulations were made under the Prevention of disease Ordinance (Cap. 59) which gave the Director of Agriculture authority to carry out the necessary tests on any animal and to order the slaughter of those found to be infected.

During the year under review some difficulties arose because an outbreak of Foot and Mouth disease in Holland interrupted the supply of pregnant heifers and in fact no replacement animals were imported during the year. Nevertheless good progress was made within the limits of available finance and a total of 235 reators were destroyed the owiers accepting monetary compensation in lieu of replacement.

b) *Animal Vaccination Scheme*

This scheme provides funds for:—

a) investigations into *Brucellosis* with a view to the control and eventual eradication of *'Mediterranean Fever'* from the human and animal population of the islands.

b) the purchase of vaccines for immunizing pigs against swine fever and swine erysipelas and for immunizing poultry against Newcastle disease and certain other poultry diseases.

Under (a) further progress was made in ascertaining the conditions under which Elberg Rev. 1 vaccine could be used on goats. It was confirmed that it could safely be used on goats carrying a natural infection without causing an active flare up of the disease and a long term experiment to determine the length of immunity conferred by vaccination prior to first mating was begun. Proposals for a pilot scheme aimed at the establishment of a nucleus of Brucella free herds were prepared.

c) *Incentive Grants*

The object of such grants is to provide assistance to farmers to try out machines, implements, crops or techniques which it is believed would be economically beneficial but the use of which is inhibited by an initial high cost which may deter a small farmer from making a trial. The major expenditure made during the year was incurred in subsidizing the price of locally made and imported compound feeding stuffs for pigs and poultry. These subsidies were finally withdrawn during the year as it was evident that the use of such fodder had become well established.

An offer was made to assist potato exporters who shipped "scrapers" packed in peat moss by making a grant of 1/6 per case of 25 kilos for potatoes consigned abroad in containers of a design approved by the department. Some response to this offer had been received by the end of the year.

d) *Expenses in connection with experts*

Money provided under this scheme goes to pay for the employment of expatriate officers in posts for which an adequately qualified local officer is not available. During the year one Chief Agricultural Advisory Officer, one Horticultural Advisory Officer and one Animal Husbandry Officer were employed under this scheme.

e) *Training of personnel abroad*

This scheme is complementary in many respects to (d) in that it provides for local officers to receive technical training which is not available in Malta, with a view to their filling posts which would otherwise have to be filled by expatriate experts. During the year one officer completed his training as a B.Sc. (Horticulture) and one as an M.Sc. (Soil Science) and were appointed to the posts of Hortculturalist and Agricultural Chemist respectively.

f) *Adopted Farms*

The intention of this scheme was to provide tenants of Government-owned farm land with fixed equipment as an example to other farmers. Difficulty has been experienced in finding Government tenants who are in fact competent to make use of additional capital and only four schemes were completed during the year, one providing a poultry unit, two providing accommodation for pigs and one a water tank.

g) *Grants and Loans*

Under this scheme loans — at 1% interest — and, in respect of certain items, free grants are provided by Government to farmers who wish to obtain certain approved items of permanent construction on their farms. Applications vastly exceeded the amount of money available for disbursement and each application is carefully "vetted" both from the technical point of view and from the point of view of the personality and "credit worthiness" of the applicant.

h) *Equipment for Crop Protection*

Funds under this head are used for the purchase of equipment for the contract spraying service operated by the department. The most notable addition during the year was a steam boiler which can be used for soil sterilization as well as for space heating.

i) *Afforestation*

The intention under this scheme was to plant a considerable acreage of Government-owned waste land with trees, mainly olive.

Over the last four years more than 30,000 trees were planted.

j) *Modernizing the Civil Abattoir, Malta*

Various extensions of and improvements to the civil abattoir have been made during the past four years which have enormously improved the efficiency of, and working conditions in, the abattoir.

k) *Sundry works at Fishing Centres*

A number of slipways has been widened and winches provided, where necessary.

B. Recurrent Expenditure

a) *Advisory Service*

The developement of this side of the department's activities continues and two Maltese specialist officers who had completed their basic training in the United Kingdom took up duties as Agricultural Chemist and Horticulturist. On the initiative of the Hon. Minister of Agriculture, Power and Communications the extension officers made good headway in making the service known and appreciated by local farmers. Besides making hundreds or individual farm visits, the extension staff organised a number of village meetings at which extension staff and specialist officers addressed farmers on various topics. At these meetings more often than not the Hon. Minister honoured the gathering by his presence.

A machinery demonstration was organised at Għammieri farm which attracted hundreds of farmers.

b) *Government Farms*

The policy of the Government Farm at Għammieri was unchanged during the year. It is to afford opportunity for trials and experiments intended to assist local agriculture, to provide good breeding stock and plant material where this cannot be supplied from commercial sources, and to act as a centre for demonstration of different techniques. Variety trials carried out during the year covered tomatoes, wheat, barley, onions and various minor vegetables. Fertilizer trials on potatoes, sugar beet and tomatoes were carried out and various new cultural treatments on crops were tried, including a very successful trial with perpetual flowering carnations under polythene. An experiment comparing the performance of Flemish Giant, New Zealand White and Local rabbits as meat producers was still in progress at the end of the year. Up till that date the Local Breed had proved as good a meat producer as the New Zealand White. The Flemish Giant although producing heavy carcases has very much smaller litters than either of the other breeds. An experiment with four types of poultry in both outdoor pens and in batteries was also in progress at the end of the year.

Stud services were provided for goats and rabbits and an A.I. service for milch cows continued to make slow progress. A number of surplus Saanen billy goats was sold to goat herdsmen for grading up local herds and selected large White boars and gilts were available to pig breeders. 43,535 day old chickens of the R.I.R. x L.S. type were sold to poultry keepers and 1,374 turkey eggs supplied for hatching.

At the Livestock Centre, Gozo, stud services for milch cows, sows, goats and rabbits are provided and a small breeding flock of R.I.R. x L.S. hens is kept for production of day old chicks.

c) *Plant Protection, Viticulture and Oenology*

The Main preoccupation of this section continued to be the operation of the contract spraying service but as farmers become familiar with the methods of control and the use of modern machines for control of pests and diseases more and

more are obtaining their own equipment for this purpose, a trend which is to be entirely encouraged even if it means the eventual redundancy of the Contract Service. The Entomologist continued investigations on the life history and control of wood boring insects causing damage on fruit trees and on the use of different chemicals and spray schedules for the control of various pests, more particularly Mediterranean Fruit Fly.

During the year Professor Olmo, an American viticulturalist provided under the United Nations Extended Programme of Technical Assistance studied local viticultural and oenological problems and his report is awaited with interest.

d) *Gardens, Plantations and Afforestation*

The main public gardens at San Anton and Buskett, as well as the various lesser gardens, have been maintained in good shape, and ornamental plantings at various sites, together with roadside trees have embellished many places in Malta and Gozo. There has been a large increase i nthe number of traffic roundabouts and minor islands which have been planted up and have to be maintained in a tidy condition.

e) *Marketing*

There have been no new developments in marketing during the year.

f) *Veterinary Services*

The Principal Government Veterinary Surgeon is responsible for the operation of the civil abattoirs in Malta and Gozo and for inspection of all meat as well as for the health of the local animal population. A total of 12,540 bovines, 8073 caprines, 10464 ovines and 38,202 pigs were passed through the civil abattoirs during the year. There were no major outbreaks of disease amongst the animal population. Free vaccination against swine fever, swine erysipelas, fowl pest and fowl pox is provided. In spite of the service these diseases continue to take some toll from breeders who are too indolent to apply for vaccination.

Good progress was made during the year with the scheme for eradication of Brucella abortus and Bovine Tuberculosis.

g) *Fisheries*

The Department of Fisheries has been absorbed by the Department of Agriculture. The framing up of a fish policy now devolves on the Director of Agriculture.

h) *Co-operatives*

There are 25 societies, six of these, however, are in course of liquidation. The total membership of the other 19 exceeds 3000 members.

The combined assets of these latter co-operative societies are .valued at £237,000.

III. THE DEPARTMENT OF AGRICULTURE

a) In the year 1962, the Department of Agriculture absorbed the Department of Fisheries. The Director is therefore now responsible for both the development of agriculture and fisheries. He is assisted in his duties by an Assistant Director of Agriculture who in turn is aided by an Administrative Officer. Mr. Joe Frendo, the Chief Fisheries Officer, remains the senior officer responsible for the execution of a sound fisheries policy.

The Department is made up of a number of Sections, each with ist head. All these sections, though independent of one another, have their functions correlated, through the directions given by the Director of Agriculture who formulates the agricultural and fisheries policies in accordance with ministerial directives.

b) The following constitute the main Divisions of the Department:—

i) Administrative Division. ii) Agricultural Marketing. iii) Information Division. iv) Plant Protection. v) Soil and Nutrition. vi) Horticultural Division.

vii) Government Experimental Farm. viii) Viticulture and Oenology. ix) Extension Service. x) Gardens, Plantations and Afforestation. xi) Veterinary Services. xii) Gozo. xiii) Co-operatives. xiv) Fisheries.

i) The Administrative Division is subdivided into (a)Registry, (b) Expenditure, Personnel and Supplies and (c) Pitkali Accounts, Revenue and Loans and Grants.

(a) The Registry is the medium through which all Sections operate. On the prompt action of the personnel of this Section all other Sections depend. The quick movement of the files contributes appreciably to the general efficiency of the Department.

(b) The Expenditure, Personnel and Supplies Section is headed by a Higher Executive Officer. He is responsible for all payments made by the Department and he is generally consulted on questions relating to recruitment, promotion and discipline. All Indents, draft specifications and conditions for calls of tenders are drawn up by this Section. A store officer who has the physical possession of the goods advises the Supply Officer as to the orders for supplies that should be placed from time to time.

(c) The Pitkali Accounts and Revenue Section under the charge of a Higher Executive Officer, is responsible for the payment to farmers of produce sold at Pitkaliji and for the collection of all fees, etc., due to the Department. Questions regarding Loans and Grants are also dealt with by this Section.

ii) The Agricultural Marketing Section is managed by an Agricultural Economist assisted by a Marketing Officer. This Section watches over the supply and demand position and suggests means to equalize as much as possible these two variables.

Subsidies fall also within the sphere of this Section. The Pitkali Inspectors who daily supervise the sales of vegetables made at the several Pitkalijiform part of this Section. This system enjoys the full confidence of the majority of farmers who in virtue of this procedure get the full proceeds less a small commission that their produce fetches at the auctions.

iii) The Information Section is under the charge of a Senior Information Officer. It is responsible for the editing andpublishing of the monthly paper 'Il-Bdawi' and for the running of the Sunday Broadcasts.

iv) The Plantpathology Section includes the Contract Spraying Service. A modern laboratory including a photographic room is available to this section Here insect pests and plant diseases are diagrnosed, and research in remedial measures is carried out.

v) Soil and Nutrition — The Agricultural Chemist has been given charge of the Land Use Section. This unit now incorporates the Surve Office. A Laboratory for the examination of animal nutrition and soil analysis is grandually being equipped.

vi) Horticulture is being given the spurt it deserves. The number of glass and ploythene houses is on the increase and the items planted are also becoming more numerous. Thomatoes, bell-peppers, cucumbers and carnations have given remarkable results.

vii) The Government Experimental Farm is controlled by a Superintendent. Experiments of all kinds are carried out here and the knowledge gained is passed on to breeders and farmers. Pedigree animals and tried seeds are distributed to herdsmen and farmers rsepectively, at reduced prices.

viii) Viticulture and Oenology are being increasingly developed. A Model Vine Nursery has been established and experiments have been carried out with some success. This Section has contributed greatly towards making the Islands self spuporting in the manufacture of little wines.

The Buskett Model Winery has now stopped to manufacture wine for the public. Only choice wines, on an extremely restricted scale, are being made.

ix) The Extension Service is run by a Higher Agricultural Officer with three other Agricultural Officers to assist him. The Island has been divided into regions and each Agricultural Officer has one region to look after. The duties of these Officers are manifold and include the dissemination of agricultural knowledge in all its ramifications including Animal Husbandry.

x) Public Gardens, the Governor's private gardens, plantations along roads, afforestations over all the Island, roundabouts, strips and glacis are all managed by the Superintendent Public Gardens.

Nurseries which are the chief source of supply of both decorative and fruit trees come within the Superintendent's sphere of duties.

xi) The Veterinary Services are responsible for the health of the animals and birds on both Islands. During the year one of the three Veterinary Surgeons resigned and left the Island.

A diagnostic laboratory is available at the Civil Abattoir.

Research into Brucella Melitensis continues. Some good results have been obtained through the manufacture of a certain vaccine which is giving partial immunity from the disease to goats. But as these good results are not considered to be as yet significant enough, further experiments are being proceeded with.

xii) The Senior Agricultural Officer is in charge of all agricultural activities in Gozo. He carries out the day to day business as directed from time to time by the Director of Agriculture.

xiii) Co-operatives are supervised by a Higher Executive Officer whoo has a number of inspectors to assist him to examine the books of accounts of the several co-operatives and to give advice to the various committees conducting the business of the co-operatives, spread all over both Islands.

xiv) The former Department of Fisheries has now become integrated with the Department of Agriculture. A Chief Fisheries Officer carries out the Director of Agriculture's directives. A number of Fisheries Officers and other staff help him in the execution of his duties.

IV — THE MARKETING SECTION

General

The main activities of this section consist in the following:—

1) Collection of statistics in connection with Agricultural products;
2) Supervision of the wholesale Pitkali Markets;
3) Inspection of Agricultural Produce at the Export and Import Inspection Shed;
4) Recommendations to the Director of Industrial Development prior to the issue of licences for the import and export of agricultural products;
5) Issue of permits in connection with the distribution of locally milled wheat offals and manure;
6) Watching over controlled prices of fresh fruit, vegetables and meat at the retail levels.

1. *Vegetables, Fruit and Cereals*

i) *Vegetables*

a) *Potatoes*

Potatoes are extensively grown in Malta both to meet the local market demand and for export. Every year some 4,000 tons of seed potatoes chiefly Arran Banner and 231 tons Winter potatoes were exported mostly to the British and Dutch Markets.

In 1962, 5,652 tons of ware potatoes consisting of 5,421 tons Spring potatoes and 231 tons Winter potatoes were exported mostly to the British and Dutch Markets.

During 1962 the varieties imported for sowing were:— Arran Banner, Alpha, Up-to-date, Craig Royal, Record and Kaptah.

b) *Onions*

Onions are also exported in sizeable quantities.

During 1962, 2,567 tons were exported; the bulk going to the United Kingdom.

The seed is almost wholly grown locally. Two main varieties are grown, one to cater for the local market, the other mainly for export. The local market prefers the round pink type and the foreign market is generally met by exporting the round yellow flat top type.

This latter variety is mainly grown on relatively dry land, mostly in the eastern and south eastern districts.

c) *Tomatoes*

Tomatoes are an important item of Agricultural interest. Progress in this line has been continuous. At first production was directed towards satisfying the local table requirements, next it was stepped up in order to meet the requirements of the local canning industry and recently it was specially increased to do away with the import of late and early tomatoes.

At present the Island is practically self-supporting in tomato requirements.

To enable farmers to grow tomatoes out of season the Department has given, and is still giving, loans and grants to various farmers in Malta and Gozo for the purpose of erecting glasshouses and polythene houses.

During 1962, 1,268 kilos of glasshouse tomatoes were exported to the United Kingdom. It is hoped that in the coming years, the export of tomatoes will appreciably increase.

d) *Other Vegetables*

Hardly any other fresh vegetables are exported. But all local requirements on the other hand are met from local production.

The principal vegetables grown are:— Artichokes both Globe and Jerusalem, Broad Beans, Cabbages, Carrots, Cauliflowers, Cucumbers, Kohlrabi, Lettuce, Long Marrows, Vegetable Marrows, Peas and Pumpkins.

ii) *Fruit*

Fruits of all kinds are grown. The most important being apples, cherry plums, figs, melons-water, melons-winter, melons-sugar, oranges, peaches and strawberries. However, the demand for fruits is so great that considerable quantities of fruit are imported every year mainly from Italy.

iii) *Cereals*

Wheat, barley, meslin, vetches, forages, dry broad beans and locust beans are grown in relevant quantities but imports remain the chief sources of supply.

2. *Pitkali Marketing Centres*

Agricultural products are mainly put on the market through pitkali (Salesmen) and Co-operative Societies.

The number of pitkali is 34 in Malta and 4 in Gozo.

The pitkali run their business in the places indicated below:—

Malta:—	7	established at	Birkirkara
	5	„	„ Marsa
	2	„	„ Mosta
	6	„	„ Rabat
	3	„	„ Żebbuġ
	11	„	„ Marina Valletta
Gozo:—	4	„	„ Victoria

With the exception of the Pitkali at Marina Valletta, Malta and Victoria, Gozo, pitkali run their business under the supervision of a departmental official, appointed for the purpose.

3. a) *Exports*

i) Potatoes are the chief items exported. The quantity exported during the year under review was 5,652 tons. The value of such exports is in the region of £209,124.

ii) Onions are also exported in considerable quantities. The quantity exported in 1962 was 2,567 tons valued approximately at £38,505.

iii) Flowers are also exported in considerable quantities. In 1957, the exports were only valued at £42,000. By 1961 however, they rose to £87,000. The value of the flowers exported in 1962 is estimated at £90,000.

At present the trade is in the hands of experienced businessmen and constant progress is maintained.

There is every indication that the export of flowers is likely to increase year by year.

b) *Imports*

Imports remain heavy but steps are constantly being studied with a view to limiting the outflow of money in the purchase of such imports. The imports for 1962 were:—

i) Fruits are imported in large quantities. The weight of such imports was 8,382,157 kilos, valued at £628,809.

ii) Eggs in shell are also imported. The quantity of such imports was 1,739,338 dozen, valued at £202,227.

iii) Fodder is another item which is imported in large quantities. The value of fodder imports in 1962 was £1,741,655.

iv) In 1962, 3,426 tons of Seed Potatoes were imported.

v) Fertilizers are imported in sizeable quantities. The value of these imports was in the region of £17,656.

4. *Licences*

All import and export licences regarding agricultural products and other items of agricultural interest are submitted with recommendation or otherwise to the Director of Industrial Development.

5. *Permits*

Every Friday morning the Secretary of the Malta Millers Association gives the relevant information regarding the Wheat Offal supply position for the ensuing week.

The balance, after deducting Gozo's allocation, is distributed by means of permits to licensed retailers, registered breeders, manufacturers and co-operative Societies, according to their requirements, as assessed by the Agricultural Officers after the supply position is taken into account.

6. *Inspections*

Agricultural Inspectors regularly make inspections on retailers of fresh fruits and vegetables, in various parts of the Island, for the purpose of ensuring that the provisions of Agricultural Produce (Markets) Regulations are carried out. Three summonses were made and two of the summoned were fined £5 and £3 respectively. The third was acquitted.

Butcher shops are also inspected for the purpose of checking the prices of fresh pork and beef.

Inspectors also collect retail prices of fresh fruits, vegetables and meat for statistical and other purposes.

V. THE PLANT PROTECTION SECTION

1. *General*

Good progress has been made in Field Control of Insect Pests and Plant Diseases. Tabular recommendations have been issued to farmers, and have been made available to other Sections of the Department. Research and Field experimentation have been directed principally towards the improvement of existing

techniques, either with newer chemicals, or with specialized machinery. In a few cases, a detailed study of the life-cycle of the pest concerned under local conditions has resulted in the changing of the previous 'blunderbuss' mode of control to more effective measures applied at definite periods.

Control of Pests and Diseases under glass has improved considerably, but still presents a problem. The apparent difficulty consisting in the relative inadequacy of 'standard' low volume machinery to give a good coverage under glasshouse conditions. A range of equipment, including a rotary atomiser, fogging machines and paint-sprayer types have been tried, but the difficulty of obtaining Fungicide formulations suitable for this sort of equipment has, so far, prevented attempts at achieving full control. Full scale trials have been started in December, the results of which will become evident early next year.

The Plant Pahologist and Entomologist attended the F.A.O. International Conference on Pesticides in Agriculture, held in Rome, from November 12 to 17. Partly as a result of his attendance at this conference, an up-to-date scheme for the Control of Pesticides for use in Malta is being prepared. The opportunity to discuss outstanding Pest and Disease Control problems with several overseas authorities was also taken.

The First List of Insect Pests of Crop Plants, begun in 1960, was completed in August, and submitted for publication. With this work, and Dr. B.E.J. Wheeled's Survey of plant diseases (1957) the Department is now in possession of Official details on what local Agriculture has to contend with in the way of Pests and Diseases. Work on the preparation of a list of Insects attacking Ornamenttal and Wild Plants has already been started, while, in addition, several Disease-organisms not mentioned in Dr. Wheeler's Survey have been identified and recorded.

During the period in question, Research workers in the following organisations were consulted on technical problems relating to pests and diseases and their control, and valuable advice was received:—

The Commonwealth Institute of Entomology
The Commonwealth Mycological Institute
The Royal Entomological Society of London
The British Museum (Natural History)
The Entomology Branch, Dept. of Forestry, Ottawa
Dept. of Zoology, University of Toronto
Forest Biology Laboratory, British Columbia
New York Agric. Experiment Station, Geneva, N.Y.
Annual Reviews Ins., California
Dept. of Zoology, Ontario Agric. College, Canada
F.A.O. Crop Protection Branch, Rome
E.P.P.O. Reporting Service, Paris
Entomology Research Institute, Ottawa, Canada
Entomology Division, D.S.I.R., New Zealand
Forestry Commission of N.S.W., Australia
School of Agriculture, University of Cambridge, U.K.
Department of Plant Protection, Israel

In addition, queries about new chemicals and equipment were sent to over 60 of the leading U.K., U.S.A. and European Firms. As a result of replies to these queries and to co-operation of the local agents of some of these Firms, full technical literature, often accompanied by samples, relating to new chemicals, is now reaching the Section, in a few cases before the chemical in question is released on the market. By this means, the Section is kept fully up-to-date with development in the way of chemicals and equipment.

The only difficulty that is being experienced particularly with regard to research work, is the comparative unavailability of scientific literature, particularly earlier works. This, of course, can only be remedied up to a point, since it would hardly be worthwhile from the economic stand-point to order every journal for the sake of a few items of interest. This, however, is being improved by a revision of the periodicals received, and by the provision of various reprints by the scientific contacts already established.

2. *Field and Laboratory Work*

Items of new equipment have been ordered, and are expected to be delivered in January, 1963. Emphasis has been placed on apparatus and equipment for Insect Breeding and Fungal and Bacterial culture-work. Several 'new' pests and diseases have now been properly indentified and recorded. Apart from a handful of these, the presence of the rest had been suspected for some years, and only lack of suitable literature and material prevented their being recorded earlier.

The laboratory was enlarged, and now includes a separate culture-room. Facilities for photography have also been improved, and microphotographs have been found extremely useful for demonstrational purposes.

a) *Mediterranean Fruit Fly*

The Mediterranean Fruit Fly, *Ceratitis capitata,* Wied.. was the subject of considerable study, both from the biological and control aspects. Field observations have now brought to light the complete seasonal life-history of the pest on its various hosts. Previous literature on this Pest in Malta was thoroughly gone into, and the various conclusions drawn confirmed or otherwise.

Full-scale Field trials at Buskett and San Anton have now proved that simultaneous control of M.F.F. and most species of scale insects is possible with a 2-spray insecticide combination programme. The best results were obtained with Lebaycidplus Dieldrin and Diazinon plus Dieldrin, other combinations — Diazinon plus DDT, Dimethoate plus Dieldrin and Dimethoate plus DDT — giving fair to mediocre results. The first two treatments are being recommended to farmers and growers while further experiments with the other three and also new combinations are being envisaged.

The possibilities of soil treatment were considered but it was decided that the project would never serve as an alternative to the cover-spray technique, in view of the pouring in of large numbers of adult flies from the untreated neighbourhood, and would serve no useful economic purpose if added to the routine cover-spray, as the latter alone is sufficient to protect the crop, even under heavy infestation conditions.

The advantage of the 2-spray programme is two-fold:— a) The normal 5 to 6 spray programme (including 2 sprays against scale insects) is reduced to a third, cutting down labour costs considerably and more than offsetting the slight increase in chemical costs. b) Dieldrin alone can only act as a preventive and has no effect on the further development of eggs already laid inside the fruit. Treatments have therefore got to be applied early, before the adults are usually present. The new combinations kill developing larvae inside the fruit, so application of the first spray can be delayed until the adult flies are actually seen on the fruit.

Owing to the relatively dry winter, Fruit Fly populations reached high levels in all areas during the 1962 season. Practically all unsprayed Fruit crops suffered considerable damage. At Buskett control plots suffered about 20% damage after 4 weeks, and were then sprayed to avoid further Fruit loss. One plot which was accidentally left unsprayed suffered over 90% fruit fall. This latter illustrates the effectiveness of the Lebaycid — Dieldrin treatment only too clearly.

b) *Wood-boring Insects*

The Baħrija area, as well as other sites, was tested again to prevent infestation by *Cerambyx miles,* Bon., and *Zeuzera pyrina,* L. Both Dieldrin and Chlordane gave good to excellent results aganist the former pest, but several larval entry-holes were observed above the line of treatment, and, in some cases, even on the main limbs. This has proved somewhat difficult to control, owing to the risk of tainting loy-lying fruit-bunches, but can be eliminated by spraying at close range from underneath.

A large number of Apple and Pear trees has been uprooted and destroyed at Baħrija, since 1961. As these were absolutely riddled with larval galleries, and no lorger an economic proposition, their removal was opportune In old orchards and plantations which have been subject to the uncontrolled ravages of *Cerambyx* for years, the future lies in new stock, rather than in the 'cure' of standing trees.

Zeuzera infestations were adequately controlled by a Malathion cover-spray, which eliminated the greater part of the adult brood and neonate larvae.

Control of *Capnodis tenebrionis* has not, so far, proved as effective as that of *Cerambyx.* The same treatment was applied, with the added proviso of spraying the soil around the trunk, but on examination, several entry-holes well below soil-level were found.

c) *Grape Berry Moths*

Both *Polychrosis botrana,* Schiff and *Polychrosis viteana,* Clemens, are now established in the Maltese Islands, but their ravages have never been as pronounced as those of other pests of maojr economic importance. Few outbreaks were reported, and with some exceptions in domestic premises, the extent of infestation was slight.

Diazinon and Dimethoate gave good control, applied as cover sprays throughout the growing season. Chlorthion again gave variable results.

Experimental work on the local seasonal life-cycle of both species, which has already been planned and will start in January, 1963, is expected to provide sufficient information to enable a definite spraying campaign to be formulated.

d) *Scale Insects*

Scale-insect infestation was considerably checked by Malathion, Diazinon, Lebaycid, Dimehoate, Chlorthion and various petroleum oils. So far, the only species which is showing some resistance to the Lebaycid-Dieldrin combination spray is the Mussel Scale, *Lepidosphes ulmi,* which was the only live scale observed after treatment. Control of the California Red Scale, *Aonidiella aurantii,* was good to excellent.

The Scale-insect problem, once a serious setback to fruit-crops, has now been reduced to modest proportions, whenever any of the recommended treatments are carried out.

e) *Codling Moth*

Favourable climate conditions resulted in considerable incidence of Codling Moth (*Cydia pomonella*) during May-June, 1962. In the peak of the infestation period, the interval between sprays had to be reduced to 8 days (from the normal 12-15).

Malathion, applied as a cover-spray, continued to give good results, though in several areas where the reduction in the time-interval was not observed, a significant proportion of the crop was lost.

Diazinon at 21 day intervals appeared to give satisfactory control but owing to circumstances entirely beyond this Section's control, no definite result could be obtained. Experiments with it and other produce are envisaged for the coming season.

f) *Potato Tuber Moth*

Attacks of Tuber moth (*Gnorimoschema operculella,* Zell.) on potatoes, particularly in storage, were average during 1962.

As infestation hardly ever takes place in the field, except on the late summer crop, it is difficult to achieve satisfactory control by standard sprying techniques without leaving an appreciable residue on part of the crop. Field hygiene, and thorough cleaning and disinfection of storage places prior to storing the harvested crop is being recommended. The possibility of Methyl bromide fumigation of export consignments is also being considered, and equipment and materials for departmental trials are being ordered, experimentation being envisaged for next season.

g) *Potato Blight*

Late Blight (*phytophthora infestans*) was not very severe in the early months of 1962, climatic conditions being unfavourable for its development. Scattered outbreaks were observed in various localities throughout February and March but only 3 general forecasts were made.

During the Autmn, weather conditions were favourable for Blight in November and December, and 7 warnings, including 3 'serious' ones were broadcast. The inclement weather, however, came too late to affect the early irrigated crop, and part of the 'dry' crop, and the disease was kept well in check by spraying. Some of the crop was lost through wind-damage.

Copper Oxychloride, Zineb, Bordeaux mixture and Copper-Zineb combination were extensively used, all giving good control.

h) *Miscellaneous*

Captan 50% W.P. continued to give efficient control of Broad Bean rust (*Uromyces fabiae*) and Pear Scab (*Vinturia pirina.*) Phaltan 50% W.P. gave good control of the former, while both Phaltan and Dodine (Cyprex) 65% W.P. gave good to excellent results on the latter.

Various systemics, including Chlorthion, Diazinon, Dipterex and Labaycid failed to achieve any result against Barbary bugs (*Tropinota*) *squalida* and *Oxythrea funesta*) on Peach.

Zineb and Captan gave moderate to poor results against Dowing Mildew of Onions (*Peronospora destructor*). Field tests with other chemicals are being held during January-March, 1963.

Simazine gave good control as a total weed-killer on Road-verges and non-cultivated strips; so far no resistant species being encountered. Full scale non-selective trials with Simazine, Atrazine, Monuron, Diuron and Diquat di-bromide have been prepared, and will take place in early January.

All Alcohol (Shell weedseed killer) was tested against Broomrape (*Orobanche crenata*) on Broad Bean, but damaged the crop. It is intended to try D.N.B.P. amine this coming season.

3. *Plant Quarantine*

Because of the spreading of the Colorado Beetle through certain parts of Italy, concern is being felt about the possibility of the pest's introduction into these Islands, with its resultant consequence particularly on the local Potato Export Trade. Should the Beetle invade Sicily and become established there — which is quite within the bounds of probability — the local situation will be rendered more acute.

There is a certain amount of conflict in academic circles as to the theoretical latitudinal limit in the Beetle's spread. It has been postulated (Bryden 1958) that local climatic conditions would suit its development and, to date, there appears to be no valid reason to doubt that statement. To guard any eventuality, precautionary measures, based on both legislation and an immediate notification system have already been taken.

There has been, otherwise, no change from the phytosanitary aspect. Figures for the period under review are as follows:

Imports

Citrus and other fruit	604151	parcels	exomined
Vegetables (Incl. potatoes)	207010	„	„
Ornamentals, etc.	4852	„	„

Exports

Ware potatoes	225106	parcels	examined
Onions	98496	„	„
Miscellaneous	5128	„	„

16 parcels of ware potatoes and other fresh vegetables from North America were refused entry in terms of G. N. 175/23. On the export side, 7,890 half-bags of potatoes were rejected on account of Tuber Moth infestation, and 40 half-bags (also potatoes) on account of Blgiht.

4. *Pests and Diseases under Glass and Polythene*

Control of Insect Pests under glass has differed little if indeed at all, from standard results in the field. In the case of disease-organisms, the problem of achieving an adequate coverage with available materials and equipment is still partly unsolved. Late Blight (*phythophtora infestans*) and Leaf-mould (*Cladosporium fulvum*) both accounted for variable setbacks in glasshouse tomato-production during the early months of 1962.

The fault has been ascribed to the inadequacy of airblast machinery. It has, indeed, been found extremely difficult to get a satisfactory cover on the lower surface of the foliage with this type of sprayer, even after attaching a variety of 'elbow' accessories and spraying from the bottom upwards. Standard hand-operated high-volume knapsack sprayers have proved little better. Fogging has given better, but still not adequate, coverage, but the limited range of materials available in the form of fog solution or concentrates, coupled with the noticeable scorching effect of the carrier oils, has considerably reduced hopes that the fogging techniques would solve the problem.

The mist-blower gives slightly better results than the air-blast sprayer, but the blast from the mozzle is still much too strong, and the lower surface of the foliage hard to cover.

Apart from the coverage problem, the prevention of visible deposits on the fruit is an important factor in glasshouse tomato production. As most fungicides are formulated as wettable powders, a visible residue is inevitable. Colloidal Copper Oxychloride has given good results in this respect, but has not contributed very much towards leaf-mould Control.

A full scale trial with Copper Oxychloride, Zineb Maneb, Colloidal Copper, Captan, Thiram, Phaltan and Dodine has been started in a glasshouse under infestation conditions, using both high and low volume methods, and the relative efficacy of the various chemicals in controlling Blight and/or leaf-mould can be assessed.

Soil-borne pests and diseases have, so far, decreased in significance following the new drench technique in chemical soil sterilisation. In the 1961 season, Vapam was applied in a relatively low volume of water on to dry or quasi-dry soil, and as a result failed to penetrate deeper than a few inches, even after rotavation. This year Vapam was applied in 6 to 8 gallons of water per square yard on to damp soil, and so far, the incidence of Root-knot Eelworms, Verticillium wilt and Sclerotinia Rot has been negligible compared with 1961. Steam sterilization was repeated at the Ghammieri Glasshouse, but the process appears far too costly to perform in private glasshouses.

5. *Advisory Work*

Over 1,000 farmers and others were given technical advice and instruction by members of the Section's Staff, either at their own premises, or at the Government Farm. The figure above does not include the hundreds of farmers who, daily, contact the Field Staff of the Section during their spraying rounds and ask about chemicals, dosage rates, and spraying techniques.

Advice was also given, at various times, to practically every importer and retailer of plant Protection Chemicals, on formulations etc., suitable for local use on dosage rates, tentative labelling and safety precautions when mixing or using particular chemicals.

6. *Contract Spraying*

With the increasing acquisition of motorised sprayers by farmers and growers, the demand for services is steadily decreasing. There was a further reduction in Staff during 1962, and the field staff has now reached its working minimum. At this stage, the overall policy of the Section is gradually changing, the standard type of operation being left largely in the hands of the individual farmer, the Section providing a service for hose operations requiring equipment, machinery or tech-

niques which the farmer, for various reasons, is not in a position to perform himself. During 1962, the following work was performed:—

1. *Spraying*

Potatoes (Blight)	1,600	tumoli
Tomatoes (Blight, Leaf mould russet mite)	70	„
Vines (Mildews)	400	„
Ornamentals (various)	35	„
Miscellaneous ground crops	80	„
Apples and Pears (Codling moth, Scab, aphids, scales ...	9,000	trees
Olives (caterpillars, weevils)	48,000	„
Peaches and other stone fruit (M.F.F., scales, leafcurl) ...	4,500	„
Citrus (M.F.F., aphids, scales)	10,000	„
Ornamental Trees (scales)	200	„

2. *Pruning and grafting*

Citrus, vines and misc. trees	4,000	trees

3. *Miscellaneous*

Glasshouse soil-sterilizations	10	Glasshouses
Weedkilling (total)	25	acres

VI. *Soil and Nutrition Section*

This Section deals with Soils and Nutrition, Fertile Soil, Land Transfers and Land Assessments. The Agricultural Chemist helped by Inspectors is in charge of the first three branches whilst Land Assessment is under the control of a Lands Officer.

I. *Soils and Nutrition*

The Agricultural Chemist has studied at Durham University England and has obtained the degree of M.Sc. (Soil Science). He is the Officer responsible for research work in connection with Soils and Animal Nutrition.

Most of his time was spent in the field with a view to finding out the existing problems touching on Soils and Animal Nutrition. From these visits he has reached the conclusion that the following problems need research:—

a) *Soil problems*

i) Use of the existing water (including brackish) resources
ii) Diseases due to trace element deficiency
iii) Fertilizers responses
iv) Classification of the soils of Malta and Gozo on more scientific bases.

b) *Nutrition problems*

Nutrition studies relating to swine, cattle and goats.

Water Utilization

It was decided to manufacture 'electrical resistance soil moisture units' and to carry out a number of experiments with them. These trials were designed to throw some light on the efficiency of water use in overhead, flood and subsoil irrigation as well as in mulches in Malta.

Trace Element Deficiency

The Agricultural Chemist observed several trace element deficiency diseases. He thinks that it is possible that iron, magnesium, boron and, may be, even other elements are missing in the soils in some areas.

An attempt therefore has been made to remedy this by spraying.

Fertilizers Responses

Fertilizers responses have been tested on a number of soils. The results are being analysed and interpreted.

II. *Fertile Soils*

586 Building Notices for the removal of soil from sites to be developed by private owners in Malta and Gozo were received. Soil removed from private building sites amounted to 38,976 cubic yards in Malta and 3,384 cubic yards in Gozo, while the estimated quantity of soil removed from sites which are being developed by the Civil Government in both Malta and Gozo amounted to 84,530 cubic yards. Soil transported was used (i) for the reclamation of wastelands at Mensija, Nghieret, Iskolba, Il-Ħandaq and Żebbiegħ; (ii) for the improvement of many other sites; (iii) for afforestation purposes at Żabbar Area, Armier and Marfa; and (iv) for the filling up of roundabouts, road strips and pits along avenues for planting ornamental trees therein.

The number of building applications received shows once more a decrease compared with last year and this is due to the modern trend of building flats rather than independent houses, a single application or notice being sufficient to cover any block of flats whatever the number of flats in the block.

The quantity of soil removed from Government sites includes that cleared from the widening of old and the construction of new roads, new schools and areas assigned to new industries.

The Services were also responsible, as in former years, for the removal of soil from areas held by them. But they kept no record of the quantity of soil removed.

Constant supervision is exercised by the Department of Agriculture to prevent the loss of fertile soil, which is needed to convert waste into arable land whenever possible in order to make up for the loss of cultivable land brought about by building requirements.

III. *Land Transfers*

(a) *Land Transfers*

The following comparative statement shows the number of land transfers effected during the period 1959/62:—

	1959	1960	1961	1962
Number of land transfers	640	610	513	578
Number of farmers who transferred, beqpeathed or sold their lands ...	570	526	444	498
Number of farmers who received, inherited or purchased lands	614	572	476	536

Transfers of land mainly fall under two groups:—

i) Normal transfers due to a) deaths, b) infirmity and c) retirement from work on reaching senility.

ii) Temporary transfers due to a) emigration, b) abandonment of land while more remuneratively employed and c) a spell of high cost of hired labour.

(b) *Cultivable Area*

The cultivable area is on the decrease due to building and other requirements. From 184,154 tmien in 1955, it had gone down to 160,194 tmien in 1961 and this process is still continuing.

The number of wholetime farmers has likewise gone down from 7,493 in 1956 to 7,330 in 1961. This decrease, however, is not significant.

The number of part-time farmers decreased quite appreciably. From 9,749 in 1956, it became only 8,815 in 1961.

IV. *Land Assessments*

Assessments

A total of 270 assessments has been made. Of these 171 were made on behalf of the Public Works Department, in connection with the building of schools, factories, drainage and widening and opening of roads. The rest, 99 assessments, were made at the request of the Water and Electricity Department in connection with the extension of water mains and the erection of electricity poles.

VII. GOVERNMENT FARMS & STOCK STATIONS

Section 1 — Animal Husbandry

a) *Cattle*

The herd at the Government Farm consisted at the beginning of the year of 14 cows and followers but this was reduced to 10 cows and followers by the end of the year. It is likely that this herd will be further reduced.

The scope behind these reductions is mainly that of economy and of keeping a heard that is as representative as possible of that reared by the majority of local herdsmen.

The average milk yield per cow of the herd was 9810 lbs on an average lactation period of 296 days. At 10.3 lbs to the gallon, this is equivalent to 952 gallons. This performance is looked upon as very satisfactory indeed.

Both cows and heifers are now artificially inseminated and their progeny is showing ever better signs as regards conformation of the breed, and the annual milk yield per cow is being progressively increased.

Cows are kept on particular balanced rations and as results have been satisfactory, the composition of the diet is being communicated to herdsmen through the Extension Service of the Department.

b) *Caprines*

The herd is made up of 25 goats. Again, this number is typical of the local herd. It consists of pure Saanen goats imported from Holland.

One of the purposes of keeping this herd is that of producing billy goats to be sold to herdsmen to sire their herds.

The Saanen billy goat is very much favoured by the goatherd and crosses with the local breed have given very good results.

c) *Swine*

The herd was kept for the purpose of selling weaners to farmers.

To prevent in-breeding a Large White boar was imported from the United Kingdom.

In March, unfortunately, Swine Fever spread in the herd. Sera were brought immediately by air from the United Kingdom, and the herd was vaccinated. Doses of 100 c.c. were injected in sows, boars and in-pig gilts. Smaller doses, varying from 50 c.c. to 20 c.c. were given to gilts, young boars and weaners. Suckling pigs received a dose of 10 c.c., as a precautionary measure. All infected pens were then mechanically sprayed. Breeding was stopped and was only resumed in June, by which time, the whole herd had become definitely clean.

Experiments and trials to produce baconers were continued during the greater part of the year.

Section II — Poultry, including rabbits

d) *Hens*

The breeding programme planned by the expatriate Poultry Advisory Officer prior to the termination of his tour of appointment was implemented during the year by the local Agricultural Officer who took over.

1400 Light Sussex pullets were placed in one wing of the Farm and 1200 two-year old Light Sussex hens in another. These latter, with the exception of 400 which were mated with pure Light Sussex cockerels, meant for replacement, were crossed with Rhode Island Red cockerels to produce day-old sex-linked chicks for sale.

The stock cockerels both Light Sussex and Rhode Island Red had been imported as day-old chicks from the United Kingdom.

During the rearing stages, outbreak of Fowl pox frequently occurred. The vaccine used was therefore considered ineffective and new types were introduced. These latter types were both of the pigeon-virus origin. One is applied by using the wing-web and the other the follicle method. Both proved reasonbly effective. But whereas the former caused no incenvenience to the birds, the latter produced considerable embarrassment and pullets had their eyes affected, no doubt, because they pecked the bruise in their thighs.

Cross-bred day-old chick production for sale continued throughout the year except for a short period in summer to overhaul and examine the incubators for possibly developed defects.

As in previous seasons, it was observed that fertility lessened very much during the hot months.

The following table shows the actual state of fertility during the four quarters of the year:—

Quarter	Eggs Set	Infertiles	Percentagexof infertiles
1st quarter...	25,810	5,154	19.9
snd quarter	17,347	4,733	27.2
3rd quarter	6,638	2,111	31.8
4th quarter...	13,104	1,999	15.2

N.B. Candling takes place on the 18th day and the term infertile includes dead embryos up to such date.

Housing and Laying trials

In the beginning of April, 4 lots of different breeds, namely, Thornbirds 606 (Hybrids), Rhode Island Red, Light Sussex and Light Sussex X Rhode Island Red were received by air from the United Kingdom.

Each breed was divided into two lots. One lot was brooded in tier brooders and later housed in pens. The other lot was brooded in the chick battery (three stages) and at 3 months old transferred to the laying battery, putting 2 pullets in each cage.

They were fed conventional farm rations. No rearing troubles were experienced in either system and the pullets showed uniform rate of growth. Some mortality cases were diagnosed and found to be due to Avian Leukosis Complex.

The first egg from all four breeds was laid on the 16th August, by one of those in the laying battery, and from those in the pens the first egg came on the 20th August from the Thornbirds 606 (hybrids).

The following table gives the monthly comparative percentage production for hens kept in batteries and in pens.

Month	Thornbird 606		Rhode Island Red		Light Sussex		L.S. X R.I.R.	
	Battery	Pen	Battery	Pen	Battery	Pen	Battery	Pen
August...	1.4	.4	1.3	.5	1.6	—	1.2	—
September	20.7	23.5	14.8	5.4	22.3	2.7	18.6	4.0
October	73.3	63.5	62.6	26.7	64.4	13.4	61.8	35.5
November	72.2	63.2	63.3	40.3	64.6	23.9	65.2	37.1

e) *Turkeys*

The flock kept was of the Broad Breasted White type and consisted of 70 hens and 14 stags. This breed has been found to acclimatise itself better than the American Bronze one. The hens laid a satisfactory number of eggs and favourable reports were made by buyers of hatching eggs.

The total number of eggs that was laid reached 3064 and of these 1383 were sold as hatching eggs.

With a view to introducing new blood into the flock, 100 day-old poults were imported on the 7th June from the United Kingdom.

f) *Rabbits*

The rabbitry was transferred to more spacious quarters and several floor hatches have been added.

The New Zealand Whites have been found to be a prolific breed but most of the imported does suffered from mastitis after littering. Their offsprings however have shown no tendency for this ailment.

The average number of the litter of the Flemish Giant breed was generally smaller than that of both the New Zealand White and the local breed.

Demand for rabbits for breeding purposes was much larger than the Farm could cope with, and naturally enough, some breeders were disappointed.

With a view to meeting the ever increasing demand, the number kept at the Farm is being increased.

Section III — Horticulture

Onions — 'Southport White Globe', 'Early White Grano' and 'White Australian' were tried but the results obtained were exceedingly poor.

Barley — Trials with 'Rikka and 'Herta' outyielded other varieties, including the local one.

Wheat — Trials with 'Mentona' and 'Garigliano' showed a higher yield than other varieties.

Sugar beet — Three varieties, namely, the 'Sunrise', the 'M.P.' and the 'Ponderosa' were experimented with. The last gave a poor yield.

Brussels Sprouts — The 'Harrison King Pin' and the 'Irish Elegance' were tried. Germination of both varieties has been poor.

Vegetable marrow — 'Green Bush' and 'White Bush' were sown. Because of their shape however they have not proved to be popular among buyers at the marketing stalls.

Cauliflowers — 'Master Original' and 'Copenhagen' were sown. They both gave good results.

Section V — Floriculture

Carnations — Allwood Carnations were grown for early flowering under cold-frames and in polythene house. By November they started flowering and florists have shown a great interest in them.

VIII. VITICULTURE AND OENOLOGY

In 1962, Prof. H.P. Olmo Ph.D. of Davies University California, U.S.A. was given an assignment by the Food and Agriculture Organization, Rome, at the request of the Malta Government, to spend about a year in the Islands and make a report with a view to improving the varieties of vines grown in the Islands and to advise generally on the manufacture of wines.

Prof. Olmo worked in close collaboration with the departmental staff whose duties are those of advising the growers what varieties of vines should be grown and of helping local vine manufacturers to improve their wines to meet the tastes and preferences of both the local and the foreign markets. Throughout, Prof. Olmo's approach was commendable and those who assisted him were unanimous in saying that to work with him was a pleasure.

Local vintners were given every opportunity to discuss their problems with him and meetings were always frank and cordial even when the vintners and Prof. Olmo differed in their views.

The Report by Prof. Olmo is not yet to hand but it si understood that it would be a very comprehensive one and is likely to deal with all aspects of local viticulture and oenology.

This Report is likely to be the foundation stone of the future development of the wine industry in Malta.

IX. THE ADVISORY AND EXTENSION SERVICE

Specialist Sections

The staff of the Advisory branch was strengthened in 1962 by the addition of an Agricultural Chemist after having successfully completed a course for the degree of M.Sc. (Soil) at the University of Durham, England.

Extension Service

The Exetnsion staff was reorganized. A Higher Agricultural Officer was appointed head of this branch and given three Agricultural Officers to assist him in his extension duties.

Malta was divided into four regions namely, North District, South District, East District and West Dstrict and each of the four Agricultural Officers was assigned one of these Districts.

Advisory Extension Work

The advsiory and extension work comprises the following distinct activities:—

a) Advice
b) Extension Work
c) Marketing Intelligence

a) *Advice*

The Agricultural Officers give advice to breeders and farmers on animal nutrition, horticulture, including glasshouse culture, and agriculture in general.

They advise swine-herds how to feed their pigs meant for pork or bacon and they explain to poultrymen the modern techniques of rearing poultry.

b) *Extension Work*

They pay frequent visits to farms and help herdsmen and farmers to solve their difficulties in connection with the construction of cowsheds, pig sties, poultry units, the application of fertilizers and manure. They also help farmers in connection with seed trials, soil sterilization, etc.

c) *Marketing Intelligence*

They give information to herdsmen and farmers regarding the trend of local and international market prices for particular items such as potatoes, onions, tomatoes, etc.

General Service

i) *Loans and grants*

The Agricultural officers are the link between the Administration and the herdsmen and farmers. Whenever applications for loans and grants are made by particular herdsmen or farmers, the Agricultural Officers are generally requested to report regarding such requests.

Their advice has been most helpful to the Loans Commission in enabling them to reach sound conclusions regarding the grant or refusal of applications for grants and loans.

ii) *Adopted Farms*

The Agricultural Officers have in addition helped to enable the Department 'adopt' particular farms as 'shop windows' for those who have their farms in the neighbourhood.

iii) *Farmers' Meetings*

Throughout the year, the Extension Service personnel held a number of Farmers' Meetings in different villages. By means of films, lectures and demonstrations they brought home to farmers the impellent need for them to breed the best stock, rear proven flocks of poultry, sow tried seeds, grade their produce and pack it well in suitable containers.

Though results have not been spectacular because of the innate conservative nature of the herdsmen and farmers still, significant progress has been made practically in all directions.

iv) *Machinery*

With a view to bringing down the wages bill as much as possible, farmers have been encouraged to employ more machinery on their land. The value of tractors, rotavators and other equipment has repeatedly been demonstrated to them by this Service.

v) *Young Farmers' Clubs*

The need of village meeting places for farmers to discuss their problems has not been neglected. One such club has been set up at the village of Mġarr. It is hoped that more will be opened, in due course.

X. PUBLIC GARDENDS, PLANTATIONS AND AFFORESTATION SECTION

a) *San Anton Public Gardens*

The beds and borders of annuals and perennials were kept as attractive as possible. The designs worked out in flowers appealed to all visitors, including no small number of tourists.

The orange groves were given all necessary attention.

Two new varieties of trees have been introduced. These are the 'Corisia speciosa' (the kapok tree) and the 'Phyllanthus' (the stone plant).

The public, Government Departments and Institutions have been, as usual, supplied with both flowers and plants in pots in considerable quantities.

b) *Buskett Gardens*

These gardens are patronized by the public because of their historical connectoins with the Order of St. John of Jerusalem. The Agrarian Society holds its

show on the Feast of St. Peter and St. Paul here, and the public form the towns and villages throng in thousands to see the exhibits. It is customary for many of the people of Malta to call at these Gardens during the eve of the above-mentioned feast and spend the small hours of the following morning enjoying themselves among the fruit groves which are so nice during this time.

c) *Other Public Gardens, Open Spaces, Traffic Islands and Strips*

The rainfull up to March was not adequate and bowsers had to be used to water the trees and plants.

This notwithstanding, the usual floral designs were maintained and public gardens continued to attract large numbers of visitors.

The Superintendent of Public Gardens spent a good part of his time advising on arboricultural and floricultural activities to both professional florists and amateur gardeners.

d) *Nurseries*

These Nurseries are the main source of supply of trees, plants and flowers in pots. Not only they have to provide all public requirements but also they have to cater for a large sector of the private needs, but these Nurseries are so well equipped that most of the demand is invariably met.

Importation of a variety of trees is still however necessary and every year the Superintendent of Public Gardens pays a visit to Sicily with the purpose of slecting and buying thousands of trees.

e) *Plantations*

A great stride has been made in this sphere. A number of roads has been built and trees along the sides were planted. Roundabouts have been increased and these have become real miniature public gardens in which perennials and annuals are a regular feature.

Many trees have been pruned, strutted and hoed around as necessary.

Vandalism, though much on the wane, is still apparent and no small number of trees is still lost through such deplorable action.

Traffic accidents also take their toll of the trees along the sides of the roads.

f) *The private gardens of San Anton and Verdala*

These are His Excellency's private gardens.

The usual attention to these gardens was duly given and both gardens were kept in good shape. Dead wood was cleared, surplus undergrowth was removed, where necessary bushes were thinned and decorative trees were trimmed.

g) *Afforestation*

Afforestation work continued unabated. During the summer months bowsers were used to water the trees and plants. Maintenance work was duly seen to.

The following table gives the kind of the trees planted and the localities where they have been set up:—

Locality	Olea	Carobs	Pinus	Oleander	Ailanthus	Juniper	Other
Miziep	17,184	100	—	—	—	—	—
Ballut	2,499	—	—	—	—	—	—
Ta'Mrejnu ...	2,071	—	—	—	—	—	100
Zabbar	1,415	—	259	58	—	—	—
Marfa	3,100	—	—	70	72	12	—
Armier	2,306	560	—	—	—	—	—
Totals ...	28,575	660	259	128	72	12	100

h) *Arbor Day*

An Arbor Day was celebrated by the children of the Elementary Schools of B'Kara and of the surrounding areas.

Trees were planted in a number of towns and villages. The Staff of the Department of Education explained to the children who were gathered in squares the value of trees to man and they were asked to nurse a love for trees which serve to make man's life so much gayer and so much more pleasant.

The Hon. Ministers of Education and of Agriculture, Power and Communications patronized the celebrations and the Arbor Day Committee spared no pains to see that success was assured

i) *A New Scheme*

On the initiative of the Hon. Minister of Agriculture, Power and Communications a sort of blue-print for mobilization of man-power immediately following exceptional gales was carefully worked out. This proved to be most beneficial in the March gale, when over 2″ of rain came down in one day and the strong winds that blew uprooted a considerable number of trees. Hitherto, in such contingencies, considerable quantities of trees used to get destroyed. But this time, thanks to the plan which was carefully worked out beforehand, the number of trees that were lost was absolutely negligible.

XI. THE VETERINARY SERVICES SECTION

The Veterinary Services in these Islands are carried out by two Veterinary Surgeons in Malta assisted by a qualified Meat Inspector and three Veterinary Assistants and one Veterinary Surgeon assisted by one Veterinary Assistant in Gozo. At the beginning of July, the Veterinary Surgeon in Godo resigned his post to take another job in the United Kingdom and his absence has been greatly felt.

The main activities of the Veterinary Services in Malta and Gozo fall under two main headings, i.e.:

a) Activities in the Abattoir;
b) Activities in the Field.

a) *Activtiies in the Abattoir*

The activities in the Abattoir constitute an essential public service in so far as they safeguard the health of the population. in fact, by law, all animals are slaughtered by Government butchers in the Abattoir and inspected by Veterinary Surgeons.

The following animals were slaughtered in Malta and Gozo Civil Abattoirs:—

(i) *Slaughtering from* 1*st January to* 31*st December,* 1962

	Cattle	Equines	Pigs	Sheep	Lambs	Goats	Kids
Malta	11,499	467	34,272	4,429	5,034	6,231	1,292
Gozo	1,041	6	3,930	248	753	214	336
Total ...	12,540	473	38,202	4,677	5,787	6,445	1,628

(ii) *Weight in rotoli of above number of animals slaughtered*

	Cattle	Equines	Pigs	Sheep	Lambs	Goats	Kids
Malta	3,490,776	96,787	2,846,851	153,669	47,220	151,017	6,576
Gozo	371,721	1,619	345,166	7,133	8,295	4,276	2,733
Total ...	3,862,497	98,406	3,192,017	160,802	55,515	155,293	9,309

DISEASES AND OTHER CAUSES OF UNSOUNDNESS DETECTED IN THE COURSE OF MEAT INSPECTION

Table 10 shows returns of meat condemned in the course of meat inspection.

(iii) *Swine Fever*

47 pigs have been totally condemned, owing to Swine Fever, during the year. This goes to show that unless pig breeders have their pigs vaccinated with Crystal Violet Vaccine — which service is carried out free of charge — they are bound sooner or later to suffer heavy losses through this disease.

(iv) *Putrefaction*

Putrefaction is one of the commonest causes of unsoundness of meat. 44 carcases were condemned as being in a state of putrefaction. This is explained by the fact that animals slaughtered as emergency cases soon begin to decompose and putrefy especially during the hot summer months.

(v) *Modernising Civil Abattoir*

During the last years about £40,000 have been spent in modernising the Civil Abattoir, which though too big when built sixty years ago, became too small to cope with the ever increasing number of animals slaughtered.

All the equipment at the Civil Abattoir must be well looked after and repeatedly painted as the blood, steam, and the brackish and sea water (which is the only water available) corrodes it in a short time.

b) *Activities in the Field*

Activities in the field consist in the Prevention, Control and Eradication of animal diseases.

i) *Prevention*

Every year, Malta imports about 10,000 head of store cattle, which are fattened for three to five months and then slaughtered. These store cattle supplemented by another 2,500 local bovines represent the total consumption of fresh beef in these Islands. This importation, carried out throughout the whole year, constitutes a serious danger of introducing some infectious disease. As there is no chance of doing away with such importation and as fresh beef is preferred to frozen beef by the majority of the population there is no other option but to take the strictest precaution imaginable before any consignment of store cattle arrives in these islands. In fact, unless the exporting country is totally free and has been free for several months from Foot and Mouth Disease, no import licence is granted. Quite recently, the importation of cattle from Bulgaria was suspended because of the proximity of Foot and Mouth Disease to the Bulgarian border.

These precautions may appear to be too drastic, but they are essential. In fact through the adoption of these measures, the Islands have remained free from Foot and Mouth Disease and other infectious and contagious diseases for the last fifteen years. These precautions are also essential for various reasons, namely:—

a) The size of these islands, only 120 square miles, does not permit of any strict isolation of any infected animal. In fact, if the Foot and Mouth Disease were to take a foothold in Malta, it would spread like wildfire.

b) Some of the cow-sheds and most of the pig-sties are extremely difficult if not impossible to disinfect properly.

c) The control of movement of animals would be an extremely difficult task.

d) The Quarantine Station at Manoel Island has been demolished by enemy action and has never been re-instated. Only one shed capable of housing about two hundred bovines is left. The Quarantine Station if re-instated could be of some help in an emergeny.

Besides the strict control exercised before granting an import licence, all cattle are examined immediately on arrival. They are then kept under observation for another three to five days and again examined before they are released.

Horses are likewise examined for Glanders and Farcy on arrival, and dogs, imported from countries where Rabies is known to exist, are kept in quarantine for six months in Government Quarantine Kennels. The same period of quarantine is imposed on dogs coming from Rabies free countries if they happen, during their journey, to have travelled through countries where Rabies exists.

ii) *Control*

The most prevalent animal diseases are:—

a) Bovines: Tuberculosis, Brucellosis and Mastitis;
b) Swine: Swine Fever and Swine Erysipelas;
c) Caprines: Brucellosis;
d) Poultry: Fowl Pest and Fowl Pox.

a) *Bovines*

The control of Tuberculosis and Brucellosis is explained under the heading 'Eradication'.

It is known that Mastitis has become widespread and is actually on the increase and that there are several types of Mastitis, but as farmers have got into the habit of buying, without any prescription, intramammary penicillin and injecting it into diseased udders, irrespective of the type of bacteria causing the disease, control of this disease has been lost. A lot of money is being wasted in this way for farmers as a rule inject more pencillin than is necessary for they as a rule inject more penicillin than necessary without finding out what is the real cause of the disease.

b) *Swine*

(i) *Swine Fever*

Swine Fever has become endemic and year after year has been playing havoc with the swine population. If it were not for this disease, the number of pigs reared in these Islands would be doubled and the pig breeders and rearers would not lose money. At present the only control to check this disease consists in the vaccination of pigs with Crystal Violet Vaccine. During the current year 7729 pigs were vaccinated against Swine Fever but this amounts to only 17% of the number of pigs slaughtered. It is rather unfortunate that only a few pig breeders avail themselves of this opportunity.

Some breeders have lost faith in the Crystal Violet Vaccine for the following reasons:—

a) Sometimes there is a break-down in vaccinated pigs and when such an unfortunate thing happens it gives a bad name to the vaccine and a tremendous setback to all propaganda. Quite recently there was a break-down in pigs at the Government Farm although all the pigs had been recently vaccinated with Crystal Violet Vaccine.

b) More often, however, the fault of such break-downs must be attributed to the human factor and not to the inefficiency of the vaccine.

Sometimes pigs are vaccinated when they are apparently healty but when in fact the disease is in the incubation period. Pigs are sometimes put into badly infected sties or are mixed with infected pigs immediately after vaccination.

This year 38,202 pigs were slaughtered at the Civil Abattoir and about 3,500 at the Malta Bacon Factory. This total of 41,702 pigs slaughtered in one single year is the highest since 1945 when 42,900 were slaughtered.

(ii) *Swine Erysipelas*

This disease is also endemic but its ill effects on the pig population are mitigated by the fact that nowadays it is easily cured and whenever one pig dies of swine erysipelas, the rest of the pigs are vaccinated and cured. Free vaccination of pigs against Swine Erysipelas is also carried out by Government on a voluntary basis and 8,037 pigs were prophylactically vaccinated against Swine Erysipelas this year.

c) *Caprines*

The principal disease affecting goats is Brucellosis (Melitensis). About 20% of our goat popluation are affected with this disease and the losses through abortion and reduced milk yield must be quite relevant although not all farmers seem to appreciate such losses as these occur gradually and only a few goats abort every year. However for the last four years research work has been carried out and is still being carried out with a view to finding a suitable vaccine which will immunise goats against abortion.

d) *Poultry*

The main diseases affecting poultry are Newcastle disease and Fowl Pox. These diseases are endemic and are causing great financial losses to breeders.

For several years intensive propaganda has been made with a view to inducing poultry keeps to vaccinate, free of charge, their fowls against these two diseases.

This year 63,640 fowls were vaccinated against the Newcastle disease, 31,132 against Fowl Pox and 7,865 against Fowl Tyhoid and Fowl Cholera. When these figures are compared with the number of poultry vaccinated in 1948 i.e. 9,464 and 10,537 vaccinated against Fowl Pox and Fowl Cholera respectively, the great progress that has been made becomes at once apparent although there is still room for further advance in this matter.

During the last few months there has been a big drive in rearing poultry on a large scale. A small number of poultry breeders has started rearing thousands of birds on the intensive system. If they are successful, others will follow their example and in a few years' time the importation of millions of eggs and thousands of frozen poultry each year is likely to be drastically cut down to the great benefit of local breeders.

Government has offered free vaccination to all those whoo ask for it without any distinction between the backyarder who keeps only a dozen fowls and the pig poultry breeder who keeps thousands.

These large poultry breeders sooner or later are bound to be faced with some disease or nutritious trouble and the Department therefore has thought it prudent to take steps to engage a Veterinary Bacteriologist with duties to diagnose poultry and swine diseases to manufacture vaccines and to keep contact with the swine and poultry breeders.

(III) *Eradication*

The enactment of the Prevention of the Disease Ordinance (Chap. 59) on the 26th May, 1961, enabled the Department to proceed smoothly with the eradica-

tion of Tuberculosis and Brucellosis. Whereas previously several herdsmen refused to have their cows tested, they offered very little or no opposition at all to the Disease Eradication Scheme after the enactment of the law. Thus in Gozo all cows that supply milk to the Milk Marketing Undertaking (1700 in all) were tested and all reactors to Tuberculosis and Brucellosis slaughtered and compensated for. To all intents and purposes Gozo may be considered a free area.

In Malta, 165 herds containing 3225 Bovines have been tested for both Tuberculosis and Brucellosis. All the T.B. reactors have been slaughtered but the majority of Brucella reactors could not be slaughtered.

In November, 1961, a severe epidemic of Foot and Mouth Disease broke out in Holland, the country from which we import our pedigree pregnant heifers to be exchanged with slaughtered reactors. At first it was thought that this fact was going to handicap the execution of the Disease Eradication Scheme but most of the herdsmen opted for monetary compensation and others who insisted on having their reactors replaced by other cows were given the chance to choose local heifers which were tested before they were introduced into the clean herds.

After March, 1963, there will remain about 150 herds with 1,500 cows that have never been tested for Tuberculosis. No one can say with accuracy the number of reactors that are likely to be found. Judging by past experience it is expected that about 20% reactors would still be found.

Artificial Insemination

In 1960 artificial insemination in cows was started on a voluntary basis. Knowing how conservative and seeptical farmers are, the Department did not expect spectacular results. However during 1960, 120 cows were artificially inseminated. The majority of these were cows that failed to conceive by natural mating. In 1961, there was a slight improvement. In fact 231 cows were artificially inseminated.

After the first two years of trial it was expected that the number of cows artificially inseminated would be appreciably increased. However this was not the case. In fact in 1962 only 214 cows were artificially inseminated. This poor response on the part of farmers is explained by two facts:

a) usually every farmer who keeps a large number of cows keeps a bull of his own to serve his cows;

b) farmers do not seem to show a preference for Artificial Insemination and they mate their cows with a licenced stud bull or with the nearest bull belonging to another farmer.

These two factors limit the scope of artificial insemination.

XII. RESEARCH IN ANIMAL BRUCELLOSIS

(a) *Laboratory Work*

An experiment was started during the year to test the length of immunity produced in goats by vaccination with the vaccine known as Rev. 1. This vaccine is now in use in Malta but the duration of immunity produced is not known and it is desired to know whether re-vaccination is necessary.

The former Government Poultry Farm at Wied Incita was made available to accommodate the required number of goats. A number of virgin goats were acquired from brucella-free herds on the island of Gozo. In August, 65 of these goats were vaccinated and 60 remained untreated as controls.

It is the intention of the Department to test the immunity of half these goats during the winter of 1963-64 and of the remainder during 1964-65.

Investigations into the value of various diagnostic tests available for the diagnosis of caprine brucellosis were continued. These investigations confirmed the previous conclusions that the complement fixation test is the most effective single test available. A variety of different antigens were compared and also several different techniques for the performance of the test were tried out; special attention was paid to the standardization of the agglutination test carried out on milk samples (whey). The number of samples tested by this latter method was insufficient for any firm conclusions to be drawn, but further investigations are planned, espeecially as milk samples are more easy to obtain than blood samples.

(b) *Field Work*

During the year, 1,264 goats were vaccinatted with Rev. 1 vaccine, produced in the Brucellosis Laboratory, Ghammieri.

Plans for introduction of a schembe for the establishement and registration of brucellosis-free goat herds were worked out. These plans are based on a combined method of vaccination, followed later by testing and the slaughter of any goats remaining infected.

(c) *Cattle*

Progress in the eradication of brucellosis was held up by various factors. At the end of the year approximately 30 infected herds remained.

An experiment designed to determine whether Brucella melitensis will spread amongst cattle or whether each bovine infection originates from contact with goats, was begun at Ghammieri.

(d) *Personnel*

A grant to cover the salary of the Officer in charge of this work and also to meet the cost of a small amount of equipment was made by the World Health Organization. Under this agreement the Officer concerned spent the last three months of the year in the United Arab Republic on a technical Assistance assignment.

XIII. THE GOZO SECTION

1. *Introduction*

Gozo is mainly dependent on agriculture. Because of this, the gradual development of agricultural activities has been aimed at.

Significant progress has been made in the field of animal husbandry, horticulture, and agriculture in general.

a) *Animal husbandry*

Good quality breeds are maintained at the Gozo Livestock Centre. Facilities for stud services are available and surplus stock is sold at reasonable prices to breeders.

b) *Horticulture*

Emphasis on cultivation under glass has been made. Tomatoes, cucumbers and bell peppers have been most successfully grown under glass and growers have received very remunerative prices for their products.

c) *Floriculture*

Increasing attention is being given to the cultivation of flowers under glass. Carnations have been grown with marked success.

It is already apparent that floriculture under glass is a very remunerative pursuit and is therefore being actively encouraged.

d) *Agriculture*

Experiments and trials with new seeds have continued and farmers have been advised as to the seeds and fertilizers to use.

Strawberry plants of several varieties have been distributed in large quantities at reduced prices.

f) *Plant Protection*

It appears that this Service has finally broken down the hitherto entrenched conservatism of the farmers, who seem to be just starting to appreciate the advantages of modern techniques over the former ways of dealing with pests and diseases. Farmers have now acquired their own spraying machines and are using chemicals quite liberall. Better results are everywhere apparent and the former ravages are significantly on the decrease.

g) *Laboratory*

Though no agricultural, veterinary and research laboratories are to be found in Gozo, still the affected plants and animals are taken to Malta and ailments diagnosed. Effective cures are subsequently extensively carried out.

2. *Rainfall*

The following table gives the comparative monthly rainfall for the period 1960-62:—

Month	1960 (in inches)	1961 (in inches)	1962 (in inches)
January	2.22	1.73	1.50
February	.20	.43	3.18
March	1.18	.98	2.35
April	.25	.14	.52
May	.44	.94	—
June	.06	—	—
July	—	—	—
August	—	—	—
September	1.04	.34	.59
October	.41	.20	6.41
November	.34	1.70	1.99
December	4.97	1.25	2.98
	11.11	7.71	19.52

3. *Land under cultivation*

It is estimated that the area of land, in Gozo, is divided as follows:—

Area under dry cultivation	35,000 tmien
Area under irrigation	1,000 „
Area of waste land	1,500 „
	37,500 tmien

4. *Agricultural machinery*

The high cost of hired labour has forced the farmer to make greater use of modern agricultural machinery. The Department gives every encouragement in this direction and loans and grants are liberally made for this purpose.

Response has been satisfactory.

5. *Public Gardens, and plantations*

The Gozo Civic Council is responsible for these activities.

6. *Public Plantations*

The Gozo Civic Council has taken over these plantations.

7. *Public Nurseries*

These nurseries are the sources of supply for the public plantations, public gardens, roundabouts, strips, glacis and private gardens.

The fruit nurseries serve as a supply centre to all persons who need fruit seedlings. Here are found plums, apples, pomegranates, peaches, apricots, kaki, nectarines, cherries, pears, quinus, oranges, lemons, walnuts, black-mulberries, loquats, figs, vines, and olives.

8. *Viticulture*

Viticulture is given every possible encouragement. Good prices for grapes have induced growers to increase the area under vines. The Department has sold 19,960, 43,800, 55,860 vine rootlings in the year 1960, 1961 and 1962 respectively. Demand is still rising.

9. *Wine Development*

The manufacture of wine is now a national industry. All local demand is met in full and export of Malta typical wines is envisaged in the not distant future. Germany, Switzerland and the United Kingdom have become good customers.

10. *Afforestation*

No fewer than 2,300 trees have been planted in Gozo. Several sites on Government waste lands have been afforested. Ta' Blankas, Tingi and Ghajn Damna have all been heavily afforested.

11. *Water Dams*

A Government service has been set up with the object of pumping water from water dams and of filling the wells of farmers whose lands are adjacent to these dams.

This service has proved to be very popular and requests for it are heavy.

12. *Fodder Scheme*

In view of the easing of the supply position, the Fodder Control Scheme has ceased to function and wheat offals are now decontrolled.

13. *Livestock Centre*

This Centre has proved of inestimable value to breeders. Farmers who formerly mated their animals without caring much for the qualities of the sires, have been making use of this Centre's Stud Services. The result has been revolutionary. The breeds are now becoming purer and their performance is significantly better.

XIV. THE CO-OPERATIVE SECTION

The Co-operative Section is entrusted with the registration and supervision of co-operative societies as required by the Co-operative Societies Ordinance of 1964. Direct supervision is continually exercised with a view to ascertaining that registered societies are managed in conformity with the Ordinance and the Regulations.

One or two Co-operative Societies, every now and then, as is well known, simply get stuck and cannot pull themselves out of the rut. In such circumstances the only sensible step is liquidation in the interest of all concerned. However, thanks to the encouragement and guidance given to the Committees by the staff of the Co-operative Section liquidations have been the exception and not the rule.

Progress in the auditing of accounts has been maintained. The books of 15 societies have been brought up to date, a good feat indeed, and there remains only

the back load of 5 other societies. The liquidation of 4 societies is still being actively proceeded with. Liquidation proceedings are however lengthy and drag on for years.

Two fellowships in Co-operative Studies have been awarded by the International Labour Office to Government Officers and three others to Officers of Co-operative Societies. It is thus hoped that education in Co-operative principles and techniques would be simultaneously acquired by both Government Officials and private Officers of Co-operative Societies. This knowledge helps co-operative societies a great deal and no opportunity is lost to extend it, whenever possible.

The co-operatives engaged in marketing agricultural products have been the following:—

1	established	at B'Kara
1	„	„ Marsa
1	„	„ Rabat
1	„	„ Żebbuġ
1	„	„ Siġġiewi
1	„	„ Valletta

It is estimated that through these stalls about 23% of the total sales of agricultural products are made.

XV. THE FISHERIES SECTION

During 1962 the Department of Fisheries was absorbed by the Department of Agriculture and it is now a Section of it.

The local Fisheries set-up is highly thought of by the Food and Agriculture Organization. Mr. J. Asciak the ex-Director was in fact awarded and assignment in Libya, under the U.N.E.P.T.A. programme to advise the Libyan Government on the setting up of a Fisheries Department. Two Libyan officials, one from Tripolitania, the other from Cyrenaica were sent here on a 3-month fellowship course to gain experience in Fisheries Administration.

a) *The Marketing Scheme*

Under this scheme, which was laid down by the Fish Marketing Regulations (1957), fishermen consign their catches to Government and these are auctioned under Government supervision, the fishermen are paid by Government in accordance with prices realized. This scheme is very popular by fishermen for it ensures to them prompt money. Thus they are relieved from the usual worries of collecting money due to them by fishmongers.

The wholesale value of the fish landings was £248,770.

The number of fishermen engaged in the industry remained slightly over 800. The number of hawkers active, on an average throughout the year, was in the region of 400.

b) *The Fishing Equipment supply service*

The scope of the setting up of this service was to introduce modern gear and to make it available to the fishermen at minimum cost. The creation of this service has fulfilled all expectations. It has become extremely popular among fishermen and everything possible is at being done in order to enlarge its activities with a view to meeting better the needs of the fishermen.

In the course of the year, the following equipment was puchased:—

1.	Cordages	to the value of	£4,406
2.	Nets	„ „	2,700
3.	Fishing lamps	„	430
4.	Wire ropes	„	937
5.	Corkwood	„	655
6.	Recording Paper	„	53
7.	Sundries	„	38
			£9,220

The sales amounted to £12,460, the excess over the purchases being due to stock on hand carried forward from the previous year and the subsidies on items 1, 2 and 5 amounted to £1,469.

This section also provides fishermen with advice in the form of practical demonstrations of the properties of synthetic and other modern materials. By means of this approach it has been possible to introduce the most modern type of fishing equipment. Individual fishermen were contacted when necessary to discuss with them the kind of fishing materials they most required before tenders for equipment were called for.

c) *The Vocational training service*

Classroom instruction to the sons of fishermen was given regularly once a week at the Marsaxlokk District Office by the Vocational Training Officer. The average number of Elementary Fifth Formers attending was 14. These youngsters are coached in Elementary navigation, modern fishing methods and maintenance of deck machinery. Such a knowledge is bound to prove very helpful to them in their future fishing activities.

Sunday morning broadcasts are also a regular activity of this section, and the popularity of these talks is reflected in the comments made and questions raised by fishermen when they visit the Valletta offices and enquire further on the items treated in the different broadcasts.

"Is-Sajd" the publication dealing with fishery matters was issued every month and the number of readers has continued to increase.

d) *The District Offices*

The district offices of Marsaxlokk and Gozo continued to be the venue for fishermen of the area. Here they called for payments in respect of their catches, for the issue of fuel coupons, for fishing equipment and for settling of minor berthing and slipping disputes among themsevles. Late in 1962 a Station Attendant resident in Gozo was posted permanently at the Mġarr District Office and was provided with a motor scooter in order to enable him to attend to the needs of the fishermen in other districts.

e) *Fish Landings*

The landings of fresh fish were slightly lower than those for the previous year, the total being 1,685,955 rotoli against 1,708,394 rotoli in 1961, a drop of 42,439 rotoli.

f) *The Winter Fisheries*

During the winter months local catches fall very much below the demand. In an attempt to remedy the situation, a small trawling fleet was introduced between 1956 and 1959. Initially the contribution by these trawlers towards an increase in the winter catches was satisfactory but this year their performance was very discouraging.

During the four winter months the landings amounted to 278,866 rotoli or 16.54% of the year's catches. The methods by which this fish was caught is shown hereunder:—

Fishing Method	Rtal
Pots	135,948
Trawling	86,272
Trammel, tangle and gilling nets and long lines ...	44,327
Anchored lines	12,319
	278,866

g) *The Lampara Season*

The Lampara or Macherel season was up to a few years back, along with the kanizzati fishing, the mainstay of the fishing industry in Malta, The position was patially remedied by the intensification of the winter months activities. However the Industry has still remained largely dependent on the lampara and kannizzati fisheries, which between them account for well over 75% of the year's landings.

The catches during the season which amounted to 570,400 rotoli and represented 33.83% of the year's landings were made up as follows:—

Fishing Method	Rotoli
Purse Seine (Lampara)	324,276
Long line, trammel and other net fishing	208,374
Trawling	37,750
	570,400

h) *The Kannizzati Fisheries*

By far the most important fishery in these Islands is the Kannizzati Fishery which is unique to Malta and brings in the richest dividends. It is no wonder, in the circumstances, that our fishermen spare no pains towards the procurement of the best material and also possibly the best fishing sites. These are allocated by lot in respect of each fishing district.

As has been stated 'kannizzati' fisheries on a commercial scale are so far carried out only around Malta. The gear consists of floats which are anchored to a heavy piece of limestone by testal-treated sisal rope procured by the Department. The 'lampuki' (Coryphaena Hippurus) together with 'fanfri' (Naucrates ductor), for some reason, which up to the present is unknown, settle under these floats in a pyramid fashing and are encircled by the Kannizzati net, which operates on the purse seine method and the size of which depends on the dimensions of the operating boat.

This year an unprecedented number of 75 fishing sites were allocated in the various districts around Malta and Gozo and the bumper catches made during the months of September/November compensated to a great extent the decrease in landings vis-a-vis the previous year, of the winter and lampara seasons. Out of a total of 836,689 rotoli of fish during September/December, 1962, the catch of lampuki was no less than 687,512 rotoli, which, with the pilot fish 'fanfri' (45,209) made up 732,512 rotoli. This is against 376,263 rotoli for same period in 1961, an increase of 356,249 rotoli.

The catches, by method, of the Corephene season are given hereunder:—

'Kannizzati' anchored floats	659,261
Lampuki surface long-lines	73,251
Bogue pots	58,715
Other methods	46,462
	836,689

TABLE 1

Weights and Measures

1. *Weights*

Maltese	British	Metric
1 uqija	0.93 oz.	0.03 kg
1 ratal	1.75 lbs.	0.79 kg
1 wiżna	8.75 lbs.	3.97 kg
1 qantar	175.00 lbs.	79.38 kg
1280 rtal	2240.00 lbs.	1016.00 kg

2. *Measures of Capacity*

1 kartoċċ	1.00 quart	1.14 litres
1 kwarta	1.19 gallons	5.40 ,,
1 ġarra	2.38 ,,	10.80 ,,
1 tomna	4.00 ,,	18.18 ,,
1 barmil	9.50 ,,	43.19 ,,
1 salma	64.00 ,,	290.88 ,,

3. *Measures of Length*

1 pulzier	0.86 ins.	21.83 mm.
1 xiber (12 pulzieri	10.31 ,,	26.19 cm.
1 qasba (8 t'xbar)	2.29 yds.	2.10 m.

4. *Measures of Area*

1 qasba kwadra	5.25 sq. yds.	4.39 sq. metres
1 kejla	22.41 ,,	18.74 ,,
1 sieġħ (10 kejliet)	224.19 ,,	0.45 ,,
1 tomna (6 siġħan)	0.28 acres	0.11 hectares
1 wejba (4 tmien)	1.11 ,,	0.45 ,,
1 moddd (4 wejbiet)	4.44 ,,	1.80 ,,

5. *Measures of Volume*

1 xiber kubu	0.63 cu. ft.	17.97 dm^3
1 qasba kuba	12.04 cu. yds.	9.20 ,,

Note:— An acre is equivalent to 3.6 tmien.
A tomna is a square with sides 110 ft. long.

TABLE 2

i) Farm Population 1955/61

	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
Whole-time farmers	7,493	7,813	8,100	7,527	7, 481	7,330
Part-time farmers	9,749	9,588	8,946	9,184	8,813	8,815
Farm population not engaged in farming	21,452	20,471	20,669	20,456	20,489	20,175
Children	20,234	20,041	19,639	19,034	18,190	17,191
	58,928	57,913	57,354	56,201	54,973	53,511

ii) Area

Malta	94.870 square miles	or 60,717 acres
Gozo	25.899 ,, ,, ,,	16,575 ,,
Comino	1.075 ,, ,, ,,	688 ,,
	121.844 square miles	or 77,980 acres

iii) Land Distribution 1955/61

Year	1955	1956	1957	1958	1959	1960	1961
	Tmien	Tmien	Tmien	Tmien	Tmien	Tmien	Tmien
MALTA:							
Agricultural Land							
Dry	120,250	119,137	116,806	114,380	111,684	107,980	105,543
Irrigated	6,468	6,266	6,509	6,324	5,775	5,528	5,470
Waste	21,451	20,495	19,770	19,849	19,268	19,511	18,860
Total ...	148,169	145,898	143,085	140,553	136,727	133,019	129,873
GOZO:							
Agricultural Land							
Dry	32,698	31,030	31,972	30,691	29,477	29,121	27,866
Irrigated	1,084	993	924	948	765	741	698
Waste	2,203	2,188	2,005	1,923	1,794	1,845	1,757
Total ...	35,985	34,211	34,901	33,562	32,036	31,707	30,321
Total Malta and Gozo	184,154	180,109	177,986	174,115	168,763	164,726	160,194

TABLE 3

Agriculture — Grants and Loans 1958/59 — 1961/62

Purpose	1958/59						1959/60		1960/61				1961/62	
	Grants			Loans			Grants	Loans	Grants			Loans			Grants	Loans
	£	s.	d.	£	s.	d.	£	£	£	s.	d.	£	s.	d.	£	£
Glasshouses	640	0	0	2,080	0	0	—	—	2,593	0	0	8,932	0	0	2,073	7,272
Poultry Units	—	—	—	976	0	0	—	—	1,856	0	0	7,436	0	0	2,906	11,788
O.I. Equipment	9,085	10	0	3,848	10	0	—	—	5,474	13	6	9,653	8	0	1,966	835
O.I. Equipment & Rot. Cultiv. (Combined) ...	670	0	0	1,513	0	0	320	564	3,181	14	0	5,744	0	0	1,452	4,062
Grinding Mill and Milk Machine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rotary Cultivators	—	—	—	24,177	0	0	—	16,547	—	—	—	7,795	0	0	—	10,908
Mist Sprayers	—	—	—	50	0	0	—	114	—	—	—	251	0	0	—	50
Water-pumps	—	—	—	1,295	0	0	—	—	—	—	—	75	0	0	—	120
Cultivators engines	—	—	—	—	—	—	—	450	—	—	—	—	—	—	—	—
Reversible plough	—	—	—	—	—	—	—	55	—	—	—	—	—	—	—	280
Rotary Cultivator with Pump	—	—	—	—	—	—	—	400	—	—	—	—	—	—	—	—
Rotary Cultivator with mist-sprayer	—	—	—	—	—	—		1,238				—	—	—		—
Cowsheds, sties, fodder-stores, etc.	—	—	—	4,392	0	0	—	—	—	—	—	—	—	—	—	800
Hammermill and trailer	—	—	—	100	0	0	—	—	—	—	—	—	—	—	—	—
Total	10,395	10	0	38,431	10	0	320	19,368	13,105	7	6	39,886	8	0	8,397	36,115

TABLE 4

Imports of Seed Potatoes 1962

Date	Name of Ship	Arran Banner		Craig Royal		Alpha		Record		Up-to-Date		Kaptah		Other varieties	
		Tons	Cwts	Tons	Cwts	Tons	Cwts	Tons	Cwts	Tons	Cwts	Tons	Cwts	Tons	Cwts
19.11.62	S.S. Christopher	306	17	4	—	—	—	—	—	—	—	—	—	—	—
19.11.62	S.S. Christopher	100	—	—	—	—	—	—	—	—	—	—	—	—	—
20.11.62	S.S. Chrisciane Schults	491	5	—	—	—	—	—	—	—	—	—	—	—	—
28.11.62	Wiedold Bochmer...	—	—	—	—	50	—	—	—	—	—	—	—	—	—
3.12.62	S.S.Banda	—	—	—	—	167	17	—	—	—	—	—	—	—	—
3.12.62	S.S. Banda...	—	—	—	—	250	—	—	—	—	—	—	—	—	—
6.12.62	Liza Gorg	670	—	—	—	—	—	—	—	—	—	—	—	—	—
10.12.62	Carnissesingel	—	—	—	—	492	—	—	—	—	—	—	—	—	—
27.12.62	Erika Schulte	100	—	—	—	—	—	—	—	—	—	—	—	—	—
27.12.62	Erika Schulte	100	—	—	—	—	—	—	—	—	—	41	17	—	—
27.12.62	Erika Schulte	225	—	—	—	—	—	—	—	—	—	—	—	—	—
27.12.62	Erika Schulte	—	—	—	—	—	—	—	—	—	—	—	—	—	10
28.12.62	S.S. Lun	—	—	—	—	365	3	25	—	25	—	32	1	—	—
		1,993	2	4	—	1,325	—	25	—	25	—	73	18	—	10

IMPORTED

	Tons	Cwts
Arran Banner N. Ireland	831	17
Arrand Banner S. Ireland	1,161	5
Craig Royal	4	—
Alpha	1,325	—
Record	25	—
Up-to-Date	25	—
Kaptah	73	18
Other Varieties	—	10
	3,446	10

TABLE 5

Potatoes Exported During 1961/62 Seasons

Date	Destination	Quantity			Date	Destination	Quantity		
		Tons	Cwts.	Qrs.			Tons	Cwts.	Qrs.
8.4.61	London	287	9	—	5.4.62	Liverpool ...	24	10	—
11.4.61	Liverpool ...	139	—	—	8.4.62	London	123	15	2
14.4.61	Leith	500	—	—	17.4.62	London	146	13	—
17.4.61	London	169	—	2	16.4.62	Rotterdam ...	1	—	—
19.4.61	Glasgow	800	—	—	18.4.62	London	76	13	—
20.4.61	Glasgow	662	17	—	19.4.62	Liverpool ...	173	15	—
22.4.61	U.K.	400	—	—	24.4.62	London	340	8	—
17.4.61	Holland	301	11	—	26.4.62	Rotterdam ...	82	1	—
20.4.61	Holland	923	1	—	1.5.62	London	659	16	—
27.4.61	London	610	5	2	4.5.62	Liverpool ...	344	12	2
28.4.61	U.K.	405	—	—	5.5.62	Liverpool ...	336	12	2
29.4.61	Glasgow	304	2	2	4.5.62	London	—	2	—
25.4.61	Rotterdam ...	277	—	—	10.5.62	Trieste	10	—	—
28.4.61	Rotterdam ...	640	16	—	12.5.62	London	685	4	2
2.5.61	K.U.	530	—	—	14.5.62	Liverpool/ Glasgow ...	140	—	—
5.5.61	Liverpool ...	285	14	—	15.5.62	Rotterdam ...	480	—	—
7.5.61	Holland	641	—	—	17.5.62	London	377	10	—
8.5.61	U.K.	500	—	—	19.5.62	London	125	—	—
10.5.61	London	10	5	2	19.5.62	Rotterdam ...	374	19	2
11.5.61	U.K.	450	—	—	19.5.61	Liverpool ...	287	1	—
13.5.61	Holland	518	16	—	22.5.62	London	100	—	—
30.5.61	Holland	111	1	—	24.5.62	Liverpool ...	121	15	—
9.6.61	Holland	42	10	—	26.5.62	Holland/Leith ...	355	4	2
16.6.61	U.K.	258	—	—	5.6.62	Gothenburg Sweden ...	—	—	3
					8.6.62	U.K. Port ...	54	7	—
		9,767	9	—			5,421	8	3

TABLE 6

Onions Exported During 1961/62 Seasons

Date	Destination	Quantity			Date	Destination	Quantity		
		Tons	Cwts.	Qrs.			Tons	Cwts.	Qrs.
9.6.61	Holland	31	11	—	19.6.62	Glasgow	200	—	—
16.6.61	U.K.	122	10	—	20.6.62	Rotterdam/Leith	195	—	—
17.6.61	London	137	1	—	22.6.62	Liverpool ...	65	—	—
21.6.61	Holland	255	—	2	24.6.62	Rotterdam/Leith	111	10	—
30.6.61	London	59	17	2	25.6.62	London	552	10	—
25.6.61	London	—	7	1	26.6.62	London	200	—	—
1.8.61	Germany... ...	—	7	1	28.6.62	London	250	—	—
					28.6.62	London	273	4	3
					28.6.62	London	50	—	—
					3.7.62	London	181	16	2
					11.7.62	London	381	3	2
					17.7.62	Sweden	—	—	2
					13.11.62	Tripoli	15	13	—
					23.11.62	Tripoli	28	11	—
					1.12.62	Tripoli	30	19	2
					10.12.62	Tripoli	32	6	—
		606	14	2			2,567	14	3
	Holland	286	11	2		London	1,888	14	3
	Germany... ...	—	7	1		Leith	82	10	—
	U.K.	319	15	3		Liverpool ...	105	—	—
						Glasgow ...	200	—	—
						Holland	184	—	—
						Sweden	—	—	2
						Tripoli	107	8	2
		606	14	2			2,567	14	3

TABLE 7

Sale of Vegetables from Pitkali Markets

Vegetables	1957		1958		1959		1960		1961		1962	
	Weight	Value	Weight	Value	Weight	Value	Weight	Value	Weight	Value	Weight	Value
		£		£		£		£		£		£
Artichokes (G)	973,596	6,214	720,418	9,056	689,532	9,461	930,281	6,964	1,090,510	9,572	827,326	9,769
Artichokes (J)	54,259	1,548	53,950	1,464	69,722	1,390	88,655	2,105	66,639	2,274	73,068	2,316
Beans Broad	684,552	11,684	700,537	9,808	792,131	10,710	555,275	15,401	491,946	8,658	583,929	13,113
Beans French	70,929	3,751	71,050	3,453	89,279	3,663	67,483	3,636	48,636	3,011	49,241	2,723
Beetroot (T)	176	1	—	—	—	—	—	—	—	—	—	—
Beetroot (Unt.)... ...	186,271	1,483	179,585	1,994	181,839	1,633	190,491	2,178	196,962	2,024	239,898	2,158
Bellpepper	133,464	3,529	146,673	2,832	151,967	3,015	148,701	4,005	194,228	5,801	191,632	5,493
Broccoli	2,382	45	361	11	397	14	1,616	49	998	32	1,598	36
Cabbages...	2,334,431	20,104	1,926,499	24,223	2,481,743	21,213	1,968,038	21,015	1,649,823	21,034	1,731,658	27,106
Carrots (T)	32,205	317	39,738	492	18,029	173	12,200	103	9,751	86	11,978	110
Carrots (Unt.)	834,221	8,340	869,360	10,487	1,043,689	10,423	1,000,240	12,594	1,107,476	14,464	1,163,134	13,937
C'Flowers (T)	4,602,283	23,827	2,720,129	36,104	5,000,875	28,676	3,074,471	23,296	3,101,728	24,345	2,155,404	29,886
C'Flowers (Unt.) ...	854,402	11,234	1,168,355	14,604	1,066,647	11,754	1,333,747	20,115	1,174,792	21,069	1,566,994	22,723
Celery	280,481	3,774	248,972	4,314	333,222	4,059	297,341	4,408	348,246	5,132	383,049	5,017
Centenary	2,105	36	2,003	33	1,918	28	1,690	28	975	414	55	1
Chickpeas	69,660	980	91,728	1,046	116,458	849	66,038	723	34,203	414	50,385	562
Cucumbers	128,920	2,351	113,536	2,215	128,920	2,351	124,929	2,974	127,863	3,051	101,415	3,400
Eggplant...	148,834	2,580	130,252	2,252	159,357	2,360	178,399	3,766	221,085	4,535	184,162	4,168
Endive	167,982	1,028	181,408	2,382	194,868	1,880	183,805	1,377	189,125	2,026	246,349	2,251
Garlic Dry	6,457	671	46,178	1,291	38,922	792	24,872	1,048	7,331	880	25,065	1,438
Garlic Green	107,492	5,969	183,352	2,901	157,758	2,268	146,143	1,600	82,028	5,208	145,686	5,984
Gourds	175,664	2,169	246,612	2,080	248,990	2,267	212,840	2,825	256,673	3,431	240,124	3,549
Fennel	2,020	15	624	8	760	9	1,014	11	263	2	264	2

TABLE 7

Sale of Vegetables from Pitkali Markets — cont.

Vegetables	1957		1958		1959		1960		1961		1962	
	Weight	Value	Weight	Value	Weight	Value	Weight	Value	Weight	Value	Weight	Value
		£		£		£		£		£		£
Kohlrabi...	1,754,776	15,159	1,576,076	16,772	1,652,812	15,007	1,668,663	17,444	1,609,113	18,113	1,720,090	17,809
Leeks	9,958	87	6,230	62	8,465	83	10,178	121	8,441	114	7,479	70
Lettuce	837,710	14,063	803,025	16,707	880,709	13,724	915,858	17,954	971,519	17,517	875,268	17,810
Marrows Long	401,720	6,009	476,705	4,315	424,541	4,325	449,641	6,451	571,790	12,039	477,967	7,145
Marrows Veg.	885,035	24,222	854,428	23,341	1,103,206	20,353	918,475	28,790	897,617	28,438	1,038,292	28,736
Mint Herbs	379	6	533	12	407	6	611	14	748	18	465	11
Onions Dry	817,079	14,288	1,134,532	14,124	1,262,013	13,913	742,710	20,171	738,279	22,052	1,069,075	18,399
Onions Green	581,978	6,056	373,820	3,241	693,252	6,791	298,129	2,399	531,802	9,524	627,966	6,418
Onions Pickles	17,509	262	9,542	151	14,735	168	1,455	32	1,885	37	6,939	125
Parsley	34,682	829	28,698	682	41,954	924	44,559	1,081	46,166	1,323	49,982	1,351
Potatoes (Sp.)	2,533,693	43,897	2,294,041	51,261	3,896,213	51,261	2,444,278	59,448	3,156,012	74,694	1,933,677	66,974
Potatoes (Wtr.)... ...	2,756,880	37,626	2,422,443	51,156	1,155,576	20,101	2,282,077	38,248	2,038,004	79,738	2,113,081	49,317
Pumpkins	1,141,178	18,411	1,191,340	17,593	1,296,554	13,644	1,153,767	19,877	1,105,628	21,209	1,222,543	20,729
Peas	217,598	11,575	211,632	8,360	310,376	9,720	242,445	13,349	244,139	9,558	150,345	7,742
Radishes...	1,103	14	230	15	4,032	73	1,056	38	4,450	206	5,490	216
Seakale Beet	3,420	38	1,153	16	1,071	12	222	2	880	12	571	7
Spinach	233,435	3,305	274,536	5,068	275,068	4,449	287,286	5,563	529,321	6,104	300,729	4,737
Tomatoes (Eng) ...	170,653	5,715	410,063	9,062	584,266	12,729	557,206	23,191	558,511	26,283	704,401	32,340
Tomatoes (R)	1,131,311	17,844	888,512	12,331	1,472,795	17,526	925,680	20,899	1,028,668	21,574	773,014	15,169
Tomatoes (O)	1,374,990	23,696	782,652	13,467	1,272,119	11,185	1,436,894	23,558	1,942,988	29,371	908,564	15,136
Turnips	4,830	43	861	14	3,623	81	1,650	26	5,054	82	369	9
		354,575		380,800		335,063		428,877		515,469		465,992

TABLE 8

Sale of Fruits from Pitkali Markets

Fruits	1957		1958		1959		1960		1961		1962	
	Weight	Value	Weight	Value	Weight	Value	Weight	Value	Weight	Value	Weight	Value
		£		£		£		£		£		£
Apples	392,447	8,313	368,355	9,304	230,876	6,206	500,679	14,469	402,213½	12,732	85,689	4,938
Apricots	5,333	418	1,951	275	3,256	303	2,424	241	4,136½	528	5,509¾	564
Bambinella	56,204½	2,618	31,926	1,875	23,024	1,326	40,243	2,922	20,153	1,285	11,324½	1,126
Banana	11,462	156	11,348	157	7,998	92	5,139	64	3,885	52	2,757	37
Blackberries	8,910¼	575	7,781	526	6,599	462	3,034	231	4,033½	266	4,524¾	310
Cherries	54¼	10	53	15	28½	7	25	7	—	—	26⅛	9
Figs Dry	11,103	358	254,366	6,361	10,047	189	6,235	191	6,771	242	1,829	63
Figs Early	323,636½	5,946	75,873½	7,480	232,226	6,927	257,972	7,570	162,485½	4,796	137,519¼	4,876
Figs Late	35,599½	864	44,238	819	44,842	929	46,475	1,196	40,115½	930	33,798½	1,285
Grapes	959,603	27,301	848,280	28,143	871,288	23,029	575,409	22,088	558,167½	24,711	513,484	20,346
Lemons	67,230	3,735	56,943	5,062	56,087	4,155	63,784	4,720	67,924	5,764	69,406	5,145
Lemons (Swt.)	271	11	180	7	66	3	—	—	118½	8	132	7
Medlars	30,927	1,223	20,374	914	25,596	842	27,053	1,059	35,010	1,027	19,658	656
Melons (Sugar)	367,066	8,575	581,524	9,806	586,528	8,786	365,746	9,315	347,040	8,788	302,603	9,363
Melons (Water)	366,732	8,574	586,262	9,875	495,646	8,271	441,522	8,253	376,487	10,032	341,238	9,349
Melons (Winter)... ...	202,949	3,121	246,174	3,334	314,679	4,404	165,210	2,970	151,097	3,533	171,250	3,248
Mulberries	4,429	89	5,129	150	2,528	72	4,045	110	3,917	98	2,143	67
Nectarines	2,251	90	496	21	35	2	248	18	1,588	67	346	16

TABLE 8

Sale of Fruit from Pitkali Markets — cont.

Fruits	1957		1958		1959		1960		1961		1962	
	Weight	Value	Weight	Value	Weight	Value	Weight	Value	Weight	Value	Weight	Value
		£		£		£		£		£		£
Oranges	48,232	4,919	60,393	4,747	40,154	3,637	53,823	4,636	62,119	5,690	26,160	2,779
Oranges (Swt).	6,605	906	5,421	589	6,097	744	10,846	1,178	7,734	1,334	3,888	559
Peaches	334,687	16,210	84,137	5,878	105,078	8,183	152,574	13,116	437,933	23,179	151,615¾	13,379
Pears	53,469	2,481	25,927	1,302	39,749	1,760	36,785	2,185	38,380	3,170	15,579	1,100
Pears (Prickly)	42,506	265	40,661	242	53,681	1,314	60,059	391	56,189	397	62,883	497
Plums	43,641	2,910	33,970	2,158	28,475	2,078	14,495	1,481	115,213½	3,207	39,622	3,595
Plums (Cherry)	98,504	3,435	62,587	2,764	93,168	3,701	79,091	5,539	185,420½	6,698	115,105	6,296
Pomegranates	130,051	2,550	106,998	1,757	119,847	1,760	116,552	2,245	156,742	3,126	63,840	1,506
Prunes	887	74	1,813	81	1,322	60	203	17	404	27	25	3
Strawberries (E.) ...	25,281½	4,278	30,178	5,608	37,659	7,170	36,845	6,803	52,933	9,865	41,101	7,954
Strawberries (L.) ...	1,685	974	2,643	1,450	2,757	1,472	3,556	1,602	2,339	1,206	1,055	621
Tangerines	13,918	1,025	16,316	1,231	12,907	1,074	17,595	1,245	11,956	1,064	4,559	547
Olives	467	11	1,039	26	1,612	46	223	7	688	26	164	10
Grape Fruits	73	11	68	9	88	13	86	19	36	5	1,043	124
		£112,026		£111,966		£99,044		£115,888		£133,853		£100,375

TABLE 9

i) Slaughterings during the year 1st January to 31st December 1962.

MALTA

Month	Cattle	Equines	Pigs	Sheep	Lambs	Goats	Kids
January	974	55	2,750	480	552	606	103
February	871	41	2,668	461	395	581	120
March	942	50	2,868	529	359	629	158
April	835	38	2,464	422	124	461	274
May	958	38	3,187	385	51	477	193
June	996	34	3,096	336	14	491	154
July	996	28	2,754	262	22	422	124
August	1,126	41	2,809	303	46	466	60
September ...	899	28	2,212	301	405	389	16
October	1,039	33	2,827	275	1,065	532	21
November ...	971	46	3,194	335	1.200	612	15
December... ...	892	35	3,443	340	801	565	54
No. of animals ...	11,499	467	34,272	4,429	5,034	6,231	1,292
Total Weight (rtal)	3,490,776	96,787	2,846,851	153,669	47,220	151,017	6,576
Average weight ...	304	207	83	35	9	24	5

GOZO

January	78	1	328	32	106	29	—
February	89	1	352	38	39	32	42
March	89	—	319	35	53	27	96
April	71	1	346	15	36	12	73
May	92	—	413	11	10	9	32
June	92	1	397	9	—	11	11
July	86	—	358	6	—	11	26
August	101	—	318	9	—	4	11
September ...	79	—	225	14	24	13	—
October	82	1	260	26	199	16	—
November ...	101	—	279	19	202	15	18
December... ...	81	1	335	34	84	35	27
No. of animals ...	1,041	6	3,930	248	753	214	336
Total weught (rtal)	371,721	1,619	345,166	7,133	8,295	4,276	2,733
Average weight ...	357	270	87	29	11	20	8

ii) Yearly Slaughterings for Malta and Gozo for the period 1960/62.

Year	Cattle	Equines	Pigs	Sheep	Lambs	Goats	Kids
	Qantars	Qantars	Qantars	Qantars	Qantars	Qantars	Qantars
1960	37,553	1,507	24,920	2,147	660	2,357	83
1961	26,978	1,344	26,697	2,045	595	1,862	73
1962	38,625	984	31,920	1,608	555	1,553	93

TABLE 10

Diseases and other causes of unsoundness of meat during the year 1st January to 31st December, 1962.

Disease	Cattle	Equines	Pigs	Sheep	Goats	Lambs	Kids	Total
Anthrax	—	—	—	—	—	—	—	—
Cysticercuosis... ...	—	—	—	—	—	—	—	—
Decomposition ...	1	—	—	—	—	—	—	1
Emaciation	2	—	—	—	—	—	—	2
Fevered Flesh ...	—	—	—	—	—	—	—	—
Jaundice	—	—	—	—	—	—	—	—
Mastitis	—	—	—	—	—	—	—	—
Metritis	—	—	—	—	—	—	—	—
Nephritis	—	—	—	—	—	—	—	—
Aedaema	—	—	—	—	—	—	—	—
Peritonitis	—	—	—	—	—	—	—	—
Pneumonia	1	—	—	—	—	—	—	1
Putrefaction	8	11	10	4	11	—	—	44
Septicaema	2	—	—	—	3	—	—	5
Swine Erysipelas ...	—	—	1	—	—	—	—	1
Swine Fever	—	—	47	—	—	—	—	47
Tetanus	—	—	1	1	—	—	—	2
Tuberculosis	—	—	—	—	—	—	—	—
Totals	14	11	59	5	14	—	—	103

TABLE 11

Vaccination of pigs and inoculation of poultry during the year 1st January to 31st December, 1962.

MALTA

Month	SWINE		POULTRY		
	Swine Erysipelas	Swine Fever	Fowl Typhoid & Fowl Cholera	Fowl Pest	Fowl Pox
January...	437	497	360	1,140	2,000
February	205	560	120	1,296	1,620
March	636	505	150	1,580	1,156
April	345	235	200	860	1,650
May	277	601	60	5,838	2,151
June	429	837	530	2,997	4,375
July	1,594	629	2,590	2,510	3,190
August	167	998	200	1,200	4,520
September	345	836	450	2,631	3,086
October	402	940	290	3,550	2,109
November	208	460	—	380	1,460
December	222	570	915	1,160	915
Totals	5,267	7,668	5,865	25,142	28,232

GOZO

January...	720	—	—	1,000	—
February	375	—	—	3,000	—
March	475	—	—	5,000	—
April	150	—	2,000	6,500	300
May	410	16	—	2,500	600
June	60	35	—	3,500	1,000
July	315	—	—	7,500	1,000
August	—	—	—	—	—
September	—	—	—	—	—
October	—	—	—	—	—
November	120	—	—	6,000	—
December	145	10	—	2,500	—
Totals	2,770	61	2,000	37,500	2,900

TABLE 12

Stocks of imported store cattle during the year 1st January to 31st December, 1962.

Month	Importation		Total	Slaughtered		Total	Balance	
	Bulls	Bullocks	Imported	Malta	Gozo	slaughtered	—	+
	Stock on hand on 1st January, 1962							3,459
January	—	366	366	719	34	753	387	—
February	—	928	928	738	43	781	—	147
March	—	639	639	800	41	841	202	—
April	—	1,247	1,247	700	34	734	—	513
May	—	360	360	739	44	783	423	—
June	—	292	292	844	41	885	593	—
July	—	775	775	919	60	979	204	—
August...	—	753	753	908	35	943	190	—
September	—	900	900	646	27	673	—	227
October	—	1,228	1,228	837	27	864	—	364
November	—	1,105	1,105	790	29	819	—	286
December	—	284	284	738	29	767	483	—
Totals	—	8,877	8,877	9,378	444	9,822	2,482	4,996

Stock on hand on 1st January, 1962	3,459
Imported during 1962	8,877
	12,336
Slaughtered during 1962	9,822
Stock on hand on 1st January, 1963	2,514

Slaughtered during the period 1960/62

Year	*Imported*	*Local*	*Total*
1960	10,834	2,835	13,669
1961	9,442	2,800	12.242
1962	9,822	2,718	12,540

TABLE 13

Yearly enumeration of Livestock 1954-61.

Year	Caprines		Ovines		Bovines		Swine		Equines		Poultry & Rabbits	
	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo
1954	27,279	15,129	11,666	7,616	5,439	2,035	20,576	5,024	6,328	2,355	192,096	136,097
1955	29,906	14,859	11,366	7,630	5,404	1,531	10,994	1,617	5,282	2,016	274,893	154,730
1956	29,172	14,812	10,299	6,422	7,170	1,972	13,183	1,990	5,339	1,911	270,146	155,673
1957	25,611	13,726	9,204	5,614	7,066	2,661	10,493	2,805	4,955	1,825	244,473	144,042
1958	23,743	13,201	9,233	5,778	7,626	2,172	12,381	3,981	4,748	1,827	252,588	157,307
1959	22,625	13,246	8,649	5,616	7,429	2,107	12,094	2,701	4,587	1,757	249,502	131,840
1960	21,010	13,678	7,909	5,107	7,206	2,172	11,217	2,829	4,422	1,698	264,515	132,513
1961	18,587	12,425	7,190	4,413	6,282	1,808	12,507	3,885	4,290	1,603	264,320	148,983

TABLE 14

Wholesale Value of Fresh Fish caught locally 1st January to 31st December,1962,

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total
	£	£	£	£	£	£	£	£	£	£	£	£	£
Accola	118	—	—	—	—	—	86	244	94	—	—	—	542
Arznell/Munqara... ...	300	712	1,069	2,400	846	65	107	27	—	—	—	165	5,691
Boll/Ham/Raj	215	347	452	607	899	799	426	230	—	—	26	32	4,033
Cerna	—	—	—	194	225	190	352	418	103	122	—	—	1,604
Dentici	76	115	—	102	189	198	162	262	75	96	118	—	1,393
Dott/Hanzir	—	—	—	—	462	967	701	191	—	—	—	—	2,321
Fanfri	—	—	—	—	—	—	—	4,111	3,912	1,560	755	53	10,391
Fekruna	—	—	—	—	—	—	—	33	—	—	—	—	33
Gallina	—	56	—	153	458	361	261	260	—	—	—	—	1,549
Gambli	403	93	108	39	104	157	—	—	—	110	—	127	1,141
Huta Kahla	194	194	480	614	162	—	—	—	—	—	—	18	1,662
Kahli	337	328	425	587	455	620	707	894	150	58	68	403	5,032
Kavalli	—	—	—	119	285	2,697	6,758	4,526	—	—	—	—	14,385
Klamari	195	151	125	97	77	—	—	—	—	—	—	95	740
Lacci	—	—	—	—	46	134	28	199	—	—	—	—	407
Lampuki	—	—	—	—	—	—	—	8,577	34,443	41,381	23,371	33,84	111,156
Makku	—	—	—	—	—	—	325	686	184	—	—	—	1,195
Mazzola	298	293	446	293	1,026	951	364	236	37	—	—	199	4,143
Merluzzi	28	—	114	57	187	23	—	—	—	—	—	—	409
Morina/Gringu	88	121	190	120	508	431	297	214	—	—	—	189	2,158
Mulett	103	95	154	—	—	—	41	—	—	42	—	63	498
Nemusa	—	—	—	64	—	33	—	—	—	—	—	—	97
Pagell	406	432	243	355	452	—	—	—	—	—	—	210	2,098
Pagri	—	—	—	—	—	365	240	302	—	—	—	—	907
Pixxiplamtu	232	168	291	229	—	—	—	—	—	—	—	—	920
Plamtu	119	—	120	188	—	—	—	128	—	—	—	96	651
Qarnit	607	371	479	490	826	535	221	297	157	154	268	326	4,731
Sargu	126	128	150	207	212	175	134	205	50	—	64	—	1,451
Sawrell	1,679	830	1,379	889	1,728	4,304	3,218	5,310	768	198	67	780	21,150
Sicc	51	19	71	80	80	—	42	—	—	—	—	93	436
Sirran	387	342	98	180	154	81	—	—	—	—	—	82	1,324
Skorfon	—	—	—	—	52	89	49	—	—	—	—	—	190
Tonn	70	—	—	926	—	—	—	—	440	—	—	—	1,536
Tonnaggi	—	—	—	—	—	—	—	—	—	1,696	190	—	1,886
Tracna	—	—	—	—	—	—	—	229	—	—	—	—	229
Trill	265	407	436	650	686	586	177	843	—	85	—	97	4,232
Tumbrell	—	—	—	591	192	92	—	—	204	—	—	—	1,079
Vopi	4,080	3,490	2,826	1,464	1,862	2,061	1,191	3,276	617	813	861	2,263	24,804
Xilep	189	98	145	120	402	251	251	581	122	50	63	68	2,340
Xkatlu	—	—	—	39	179	28	55	122	—	—	—	—	423
Xriegen	—	—	—	—	—	—	—	—	—	—	—	—	0
Zaghrun	—	—	—	36	79	—	—	—	—	—	—	35	150
Hut Iehor	446	690	513	597	1,128	843	724	1,150	299	249	499	615	7,753
Total	11,012	9,480	10,314	12,487	13,961	17,036	16,917	33,551	41,655	46,614	26,350	9,,393	248,770

TABLE 15

Retail Value of Locally caught fish from 1st January to 31st December, 1962.

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total
	£	£	£	£	£	£	£	£	£	£	£	£	£
Accola	137	—	—	—	—	—	108	297	113	—	—	—	655
Arznell/Munqara ...	440	1,094	1,583	4,605	1,492	95	150	42	—	—	—	277	9,778
Boll/Ham/Raj	288	505	591	851	1,307	1,130	650	296	—	—	36	45	5,699
Cerna	—	—	—	250	297	288	486	601	142	172	—	—	2,236
Dentici	94	135	—	120	241	256	187	344	94	124	144	—	1,739
Dott/Hanzir	—	—	—	—	582	1,242	975	268	—	—	—	—	3,067
Fanfri	—	—	—	—	—	—	—	5,452	6,609	2,070	980	70	15,181
Fekruna	—	—	—	—	—	—	—	50	—	—	—	—	50
Gallina	—	74	—	203	646	527	371	351	—	—	—	—	2,172.
Gambli	636	118	147	70	149	200	—	—	—	132	—	174	1,626
Huta Kakla	266	263	666	946	224	—	—	—	—	—	—	30	2,395
Kahli	421	405	558	752	532	334	921	1,162	191	74	86	469	6,405
Kavalli	—	—	—	144	342	4,031	11,041	5,950	—	—	—	—	21,508
Klamari	236	181	158	127	94	—	—	—	—	—	—	113	909
Lacci	—	—	—	—	73	208	73	290	—	—	—	—	644
Lampuki	—	—	—	—	—	—	—	11,532	55,759	54,775	32,495	5,150	159,711
Makku	—	—	—	—	—	—	437	1,080	237	—	—	—	1,754
Mazzola	400	413	670	401	1,345	1,398	546	296	54	—	—	55	5,578
Merluzz	41	—	185	72	259	36	—	—	—	—	—	—	593
Morina/Gring	113	166	287	155	656	555	394	306	—	—	—	218	2,850
Mulett	129	133	210	85	—	—	58	—	—	52	—	73	740
Nemusa	—	—	—	—	—	43	—	—	—	—	—	—	43
Pagell	486	526	298	375	522	—	—	—	—	—	—	245	2,452
Pagri	—	—	—	—	—	476	304	395	—	—	—	—	1,175
Pixxiplamtu	290	205	358	276	—	—	—	—	—	—	—	—	1,129
Plamtu	135	—	144	228	—	—	—	157	—	—	—	116	780
Qarnit	742	486	641	695	1,098	728	284	413	216	206	339	416	6,264
Sargu	160	168	198	244	265	220	183	276	66	—	80	—	1,860
Sawrell	2,855	1,423	1,802	1,125	2,525	6,753	6,199	8,564	1,131	1,550	100	1,194	35,221
Sicc	68	35	93	105	106	—	74	—	—	—	—	122	603
Sirran	493	420	139	232	220	107	—	—	—	—	—	101	1,712
Skorfon	—	—	—	—	68	127	62	—	—	—	—	—	257
Tonn	82	—	—	1,096	—	—	—	—	660	—	—	—	1,838
Tonnaggi	—	—	—	—	—	—	—	—	—	2,138	267	—	2,405
Tracna	—	—	—	—	—	—	—	285	—	—	—	—	285
Trill	428	666	650	868	1,238	1,104	278	1,233	—	126	—	39	6,730
Tumbrelli	—	—	—	707	230	124	—	—	269	—	—	—	1,330
Vopi	6,528	5,804	3,648	1,713	3,960	3,673	2,358	5,076	911	1,189	1,257	3,000	39,117
Xilep	228	127	187	154	511	312	318	839	181	70	80	86	3,093
Xkatlu	—	—	—	51	264	48	85	187	—	—	—	—	625
Zaghrun	—	—	—	61	125	—	—	—	—	—	—	50	236
Hut Iehor	522	861	601	745	1,440	1,193	1,013	1,576	343	297	632	733	9,956
Total	£16,218	£14,208	£13,814	£17,456	£20,611	£25,708	£27,555	£46,318	£66,976	£62,975	£36,496	£12,876	£362,411

TABLE 16

Average Retail Prices of Locally caught fresh fish from 1st January to 31st December, 1962.

Species	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Average Retail Price per ratal
Accola ...	8/8	—	—	—	—	—	8/6	9/–	9/9	—	—	—	9/–
Arznell/Munq.	2/6	2/6	2/8	4/–	3/–	2/6	2/8	2/5	—	—	—	2/3	3/2
Boll/Raj/Ham	4/–	3/10	4/7	4/–	3/8	3/8	3/9	3/6	—	—	2/9	3/–	3/10
Cerna	—	—	—	8/8	8/–	7/6	7/6	8/4	8/–	7/3	—	—	7/11
Dentici ...	8/6	9/4	—	9/6	9/–	9/–	8/6	8/10	9/5	9/4	10/–	—	8/11
Dott/Hanzir ...	—	—	—	—	6/–	5/2	5/8	7/1	—	—	—	—	5/7
Fanfri	—	—	—	—	—	—	—	7/9	6/–	4/6	3/8	4/6	5/11
Fekruna ...	—	—	—	—	—	—	—	2/9	—	—	—	—	2/9
Gallina ...	—	5/2	—	5/8	5/3	4/7	4/8	5/–	—	—	—	—	4/11
Gambli ...	5/10	5/9	7/2	6/6	6/–	6/7	—	—	—	7/6	—	7/–	6/4
Huta Kahla ...	4/–	4/4	4/11	4/6	4/8	—	—	—	—	—	—	2/9	4/6
Kahli	7/6	8/6	8/5	7/8	8/–	8/2	8/–	8/10	7/6	6/3	7/3	7/9	8/1
Kavalli ...	—	—	—	7/–	6/9	6/6	4/6	6/1	—	—	—	—	5/2
Klamari ...	7/2	7/6	9/–	8/6	8/–	—	—	—	—	—	—	9/–	8/–
Lacci	—	—	—	—	3/8	3/1	2/1	2/10	—	—	—	—	2/11
Lampuki ...	—	—	—	—	—	—	—	8/–	5/9	4/–	3/4	4/2	4/5
Makku... ...	—	—	—	—	—	—	4/7	4/2	2/4	—	—	—	3/10
Mazzola ...	4/10	5/6	4/7	4/8	4/9	4/10	4/5	5/3	4/11	—	—	5/6	4/8
Merluzz ...	3/8	—	4/3	6/0	4/6	3/1	—	—	—	—	—	—	3/9
Morina/Gring...	5/–	5/–	4/9	5/10	5/–	4/6	4/4	5/2	—	—	—	6/–	4/11
Mulett	5/8	5/4	5/9	5/8	—	—	4/–	—	—	4/2	—	5/9	5/4
Menusa ...	—	—	—	—	—	4/3	—	—	—	—	—	—	4/3
Pagell	8/–	7/8	8/7	8/4	8/3	—	—	—	—	—	—	9/2	8/2
Pagri	—	—	—	—	—	8/8	7/5	8/11	—	—	—	—	8/5
Pixxiplamtu ...	7/6	7/6	8/6	7/6	—	—	—	—	—	—	—	—	7/9
Plamtu ...	7/8	—	8/11	7/6	—	—	—	10/–	—	—	—	8/–	8/3
Qarnit... ...	4/6	4/–	4/8	4/8	4/8	4/4	4/1	5/2	4/8	3/3	3/10	4/6	4/5
Sargu	8/4	8/–	9/3	8/–	7/6	8/9	8/4	8/9	7/8	—	7/4	—	8/3
Sawrell ...	2/8	3/3	4/–	4/10	4/–	3/2	2/6	2/6	3/–	2/10	2/6	2/8	3/–
Sicc	3/–	3/2	4/8	5/–	5/–	—	2/3	—	—	—	—	3/6	3/7
Sirran	4/10	4/6	5/–	5/2	4/8	5/2	—	—	—	—	—	4/8	4/9
Skorfon ...	—	—	—	—	5/8	5/1	5/1	—	—	—	—	—	5/3
Tonn	8/–	—	—	8/–	—	—	—	—	6/4	—	—	—	7/4
Tonaggi ...	—	—	—	—	—	—	—	—	—	4/2	4/–	—	4/2
Tracina ...	—	—	—	—	—	—	—	5/10	—	—	—	—	5/10
Trill	5/–	4/8	4/4	4/8	5/–	4/4	—	4/1	—	2/9	—	3/2	4/4
Tumbrell ...	—	—	—	7/–	7/6	6/–	2/11	—	6/6	—	—	—	6/10
Vopi	4/–	4/4	4/9	4/4	3/10	2/9	2/8	3/4	3/8	2/6	2/7	2/11	3/6
Xilep	5/7	5/4	5/–	5/6	5/6	4/2	4/5	4/8	4/10	3/8	3/9	5/–	4/9
Xkatlu ...	—	—	—	5/–	4/9	4/4	4/2	4/4	—	—	—	—	4/6
Zaghrun ...	—	—	—	4/6	3/9	—	—	—	—	—	—	3/–	3/9
Hut Iehor ...	5/6	5/8	6/–	5/9	5/10	5/2	4/10	6/–	5/–	4/4	4/7	5/6	5/5
Monthly Average ...	4/–	4/3	4/6	4/11	4/6	4/–	3/8	4/9	5/8	4/–	3/4	3/8	4/3

TABLE 17

Catch from 1st January to 31st December, 1962. (in Rtal)

Hut	January	February	March	April	May	June	July	August	September	October	November	December	Total
Accola	316	—	—	—	—	—	254	660	231	—	—	—	1,461
Arznell/Munqara... ...	3,521	8,749	11,874	23,024	9.947	756	1,127	344	—	—	—	2,464	61,806
Boll/Ham/Rajj	1,439	2,633	2,578	4,257	7,131	6,163	3,467	1,694	—	—	264	301	29,927
Cerna	—	—	—	576	743	768	1,295	1,442	356	474	—	—	5,654
Dentici	220	289	—	252	536	569	495	780	199	265	287	—	3,892
Dott/Hanzir	—	—	—	—	1,941	4,807	3,440	758	—	—	—	—	10,946
Fanfri	—	—	—	—	—	—	—	14,070	22,030	9,199	5,348	313	50,960
Fekruna	—	—	—	—	—	—	—	361	—	—	—	—	361
Gallina	—	285	—	716	2.460	2,302	1,592	1,404	—	—	—	—	8,759
Gambli	2,180	411	409	216	496	609	—	—	—	352	—	497	5,170
Huta Kahla	1,329	1,216	2,670	4,206	960	—	—	—	—	—	—	215	10,596
Kahli	1,122	953	1,327	1,961	1,330	2,042	2,303	2,631	510	236	237	1,210	15,862
Kavalli	—	—	—	411	1,012	12,403	49,071	19,563	—	—	—	—	82,460
Klamari	658	484	351	300	235	—	—	—	—	—	—	251	2,279
Lacci	—	—	—	—	396	1,352	704	2,049	—	—	—	—	4,501
Lampuki	—	—	—	—	—	—	—	28,831	193,947	273,875	194,972	24,718	716,342
Makku	—	—	—	—	—	—	1,907	5,184	2,033	—	—	—	9,124
Mazzola	1,657	1,503	2,926	1,718	5,665	5,783	2,473	1,126	219	—	—	831	23,901
Marluzz	226	—	869	240	1,597	233	—	—	—	—	—	—	3,165
Morina/Gringu	451	665	1,208	531	2,626	2,468	1,818	1,186	—	—	—	726	11,679
Mulett	454	498	730	300	—	—	289	—	—	251	—	255	2,777
Nemusa	—	—	—	—	—	204	—	—	—	—	—	—	204
Pagell	1,215	1,371	694	900	1,267	—	—	—	—	—	—	534	5,981
Pagri	—	—	—	—	—	1,099	821	885	—	—	Œ	=	2,805
Pixxiplamtu	772	546	843	737	—	—	—	—	—	—	—	—	2,898
Plamtu	353	—	322	608	—	—	—	314	—	—	—	289	1,886
Qarnit	3,299	2,430	2,746	2,978	4,705	3,361	1,393	1,599	924	1,267	1,769	1,848	28,319
Sargu	334	419	428	611	708	502	440	630	172	—	218	—	4,512
Sawrell	21,412	8,759	9,005	4,654	12,627	42,650	49,590	68,514	7,541	1,960	800	8,953	236,465
Sicc	508	223	401	420	423	—	658	—	—	—	—	698	3,331
Sirran	2,040	1,867	556	900	942	413	—	—	—	—	—	432	7,150
Skorfon	—	—	—	—	239	498	243	—	—	—	—	—	980
Tonn	206	—	—	2,741	—	—	—	—	2,085	—	—	—	5,032
Tonnagg	—	—	—	—	—	—	—	—	—	10,262	1,335	—	11,597
Tracna	—	—	—	—	—	—	—	976	—	—	—	—	976
Trill	1,712	2,856	3,000	3,719	4,951	5,096	1,908	6,037	—	920	—	879	31,078
Tumbrell	—	—	—	2,020	613	415	—	—	828	—	—	—	3,876
Vopi	32,640	26,787	15,361	7,905	20,503	26,711	17,687	30,456	4,970	9,510	9,734	21,248	223,512
Xilep	817	476	747	560	1,859	1,500	1,440	35,95	748	382	425	345	12,894
Xkatlu	—	—	—	203	1,113	222	410	865	—	—	—	—	2,813
Zaghrun	—	—	—	270	666	—	—	—	—	—	—	331	1,267
Hut Iehor	1,900	3,038	2,005	2,593	4,937	4,619	4,194	5,254	1,372	1,419	2,759	2,667	36,757
Total	80,831	66,458	61,050	70,527	92,628	127,545	149,019	201,208	238,164	310,372	218,148	70,005	1,685,955

TABLE 18

Comparative Statement showing the monthly availability of local and imported fresh fish for the period 1959-62.

Year	1959			1960			1961			1962		
	Local	Imported	Total	Local	Imported	Total	Local	Imported	Total	Local	Imported	Total
	Rtal	Rtal	Rtal	Rtal	Rtal	Rtal	Rtal	Rtal	Rtal	Rtal	Rtal	Rtal
January	68,139	330	68,469	54,281	—	54,281	77,384	2,476	79,860	80,831	990	81,821
February	48,061	—	48,061	67,696	4,441	72,137	92,897	1,530	94,409	66,458	800	67,258
March	71,812	—	71,812	87,251	1,605	88,856	96,996	5,766	102,762	61,050	7,480	68,530
April	70,293	2,628	72,921	91,752	—	91,752	114,255	1,392	115,647	70,527	10,300	80,827
May	73,473	11,710	105,183	139,243	8,887	148,130	128,688	12,996	141,643	92,628	6,370	98,998
June	146,084	26,175	172,259	186,021	29,100	215,121	175,845	45,851	221,696	127,545	30,370	157,915
July	148,629	19,098	168,080	170,363	34,354	204,876	173,471	25,183	198,654	149,019	15,550	164,569
August	121,447	2,804	124,251	151,344	11,039	162,383	233,339	5,614	238,953	201,208	1,554	202,762
September...	170,959	6,063	177,022	175,262	6,465	181,727	230,832	228	231,060	238,164	1,240	239,404
October	192,237	770	193,007	213,944	1,266	215,210	210,251	—	210,251	310,372	—	310,372
November...	130,722	—	130,722	149,643	1,679	151,322	115,206	760	115,966	218,148	—	218,148
December	68,771	769	69,540	71,040	1,132	72,172	79,248	1,200	80,448	70,005	—	70,005
Total	1,330,627	70,700	1,401,327	1,557,840	100,127	1,657,967	1,728,394	102,996	1,831,390	1,685,955	74,654	1,760,609

TABLE 19

Comparative Statement showing the availability of Fresh Fish for the period 1961-62.

Year	LOCAL				IMPORTED				Total Quantity Rtal
	Quantity Rtal	Wholesale Value £	Retail Value	Average Retail Price per Ratal	Quantity Rtal	Wholesale Value £	Retail Value	Average Retail Price per Ratal	
1961									
January	77,384	11,912	15,649	4/–	2,476	450	474	4/8	79,860
February	92,879	13,759	18,939	4/1	1,530	324	400	5/3	94,409
March	96,996	14,651	20,058	4/1	5,766	1,402	1,690	5/10	102,762
April...	114,255	14,427	23,245	4/1	1,392	331	400	5/9	115,647
May	128,688	14,851	22,951	3/8	12,996	2,241	2,891	6/6	141,684
June...	175,845	15,989	25,995	2/11	45,851	9,538	11,830	5/2	221,696
July	173,471	15,231	24,650	2/10	25,183	5,434	6,694	5/4	198,654
August	233,339	31,579	41,447	3/7	5,614	1,183	1,464	5/3	238,953
September	230,832	43,760	53,444	4/8	228	81	92	8/1	231,060
October	210,251	32,586	43,520	4/1	—	—	—	—	210,251
November	115,206	15,828	25,250	4/5	760	163	201	5/4	115,966
December	79,248	12,028	16,696	4/3	1,200	198	258	4/4	80,448
Total ...	1,728,394	236,601	331,844	3/10	102,996	21,345	26,794	5/2	1,831,390
1962									
January	80,831	11,012	16,218	4/–	990	174	223	4/6	81,821
February	66,458	9,480	14,208	4/3	800	172	212	5/4	67,258
March	61,050	10,314	13,814	4/6	7,480	1,328	1,703	4/7	68,530
April...	70,527	12,487	17,456	4/11	10,300	1,960	2,475	4/10	80,827
May	92,628	13,961	20,811	4/6	6,370	1,002	1,320	4/2	98,998
June...	127,545	17,036	25,708	4/–	30,370	7,605	9,883	6/6	157,915
July	149,019	16,917	27,555	3/8	15,550	2,913	4,024	5/2	164,569
August	201,208	33,551	47,318	4/9	1,554	400	555	7/2	202,762
September	238,164	41,655	66,976	5/8	1,240	104	197	3/2	239,404
October	310,372	46,614	62,975	4/–	—	—	—	—	310,372
November	218,148	26,350	36,496	3/4	—	—	—	—	218,148
December	70,005	9,393	12,876	3/8	—	—	—	—	70,005
Total ...	1,685,955	248,770	362,411	4/3	74,654	15,658	20,592	5/6	1,760,609

TABLE 20

i) Co-operative Societies on Register as on 31st December 1962

Primary

Agricultural Produce	15(a)
Agriculture Equipment	2
Tailors (Supply)	1(b)
Milk Producers	1
Consumers	3(c)
Milk and Agric. Producers	1
Wine Producers	1

Central

Agriculture	1
Total ...	25

(a) 3 in course of liquidation.
(b) 1 in course of liquidation.
(c) 2 in course of liquidation.

ii) Principal Items of Assets and Liabilities of Co-operative Societies — 1962

Societies

Numebr of Societies	19
Membership	3020

Liabilities

	£
Share Capital contributions	59,109
Reserve Funds	16,068
Profits (after 25% allocation to Reserve Fund) ...	14,875
Loans received	27,284
Amount of deposits	2,315
Sundry creditors	117,402
Total ...	£237,053

Assets

	£
Cash and Bankers	34,563
Investments, Stocks and Shares	625
Movable property and stock on hand	35,688
Immovable property	92,699
Loans advanced	19,643
Sundry debtors	53,835
Total ...	£237,053

TABLE 21

Agriculture

i) Ordinary Expenditure 1959-63

	A. Personal Emoluments				B. Other Charges			
	Actual 1959/60	Actual 1960/61	Actual 1961/62	Estimates 1962/63	Actual 1959/60	Actual 1960/61	Actual 1961/62	Estimates 1962/63
	£	£	£	£	£	£	£	£
Office	17,321	18,864	21,943	19,882	—	—	—	—
Advisory Service ...	1,810	2,557	3,898	5,128	—	—	1,698	1,700
Govt. Farms	4,257	4,675	5,448	5,603	42,853	44,747	40,941	40,965
Gardens, Plantations, Afforestation ...	24,411	25,107	31,128	29,605	29,123	27,826	31,029	28,295
Plant Pathology ...	1,818	2,476	2,568	3,014	15,190	13,524	10,986	13,400
Marketing	2,261	3,008	3,243	5,696	1,290	1,279	1,105	1,370
Veterinary Services ...	13,678	14,632	17,212	17,688	6,377	6,724	7,193	7,489
Fisheries	—	—	—	12,312	—	—	—	20,685
General Service ...	—	—	—	—	9,807	9,852	7,539	8,487
Viticulture & Oenology	—	—	—	—	3,447	3,053	3,402	3,525
Subsidies	—	—	—	—	1,261	1,606	1,706	75,295
Total	65,556	71,319	85,440	98,938	109,348	108,611	105,599	201,211

ii) C. Special Expenditure 1959-62

Actual — 1959/60

	£
Purchase of a truck	491
Purchase of a Sprinkler	2,035
Purchase of two cars and two motor cycles	920
Purchase of livestock for Government Farm ...	1,025
Purchase of an electrically driven pump	50
Purchase of an adding machine	255
Purchase of a safe	56
	£4,832

Actual — 1960/61

	£
Purchase of a truck	621
Purchase of livestock for Government Farm ...	423
Purchase of two cars and two motor cycles (revote) ...	40
	£1,084

Actual 1961/62

	£
Purchase of a truck	207

Estimates 1962-63

Erection of a Cold Room at the Buskett Winery	600

iii) E. Co-operatives — Estimates 1959/63

	Actual 1959/60	Actual 1960/61	Actual 1961/62	Estimates 1962/63
	£	£	£	£
A. Personal Emoluments	2,039	2,381	2,709	2,873
B. Other Charges	5,399	7,160	7,639	7,165
C. Special Expenditure	130	—	—	—
	7,568	9,541	10,348	10,038

iv) F. Pitkali Markets — Estimates 1959/63

	Actual 1959/60	Actual 1960/61	Actual 1961/62	Estimates 1962/63
	£	£	£	£
A. Personal Emoluments	16,930	17,130	18,853	18,925
B. Other Charges	3,731	2,932	3,696	3,508
C. Special Expenditure	—	431	—	—
	20,661	20,493	22,549	22,433

v) Capital Expenditure — Estimates 1959/63

	Actual 1959/60	Actual 1960/61	Actual 1961/62	Estimates 1962/63
	£	£	£	£
a) *Colonial Development & Welfare Schemes*				
1. Cattle disease eradication scheme A 3897	23,507	16,393	24,604	25,800
2. Animal vaccination scheme D 4025	5,679	4,626	3,832	3,000
3. Incentive grants D 4250	4,359	8,194	4,665	6,000
4. Expenses in connection with experts D 4233	16,970	14,284	6,422	6,400
5. Training of personnel abroad D 4233	8,117	7,645	5,497	3,500
6. Adopted farms D 4234	204	431	994	2,100
7. Grants	569	13,262	9,013	10,000
8. Equipment of crop protection contract spraying service D 4237	2,143	2,176	414	3,000
9. Afforestation D 3819...	24,416	27,431	22,237	15,000
10. Modernizing the Civil Abattoir D 3912	7,967	3,753	2,483	4,097
11. Improvements to Public Gardens ...	—	—	—	5,000
	104,931	98,195	80,161	83,897

	Actual 1959/60	Actual 1960/61	Actual 1961/62	Estimates 1962/63
	£	£	£	£
b) *Colonial Services Vote Scheme*				
12. Purchase and adaptation of ex R.N. Abattoir	—	—	—	2,000
c) *Loan Scheme*				
13. Loans to farmers	19,368	39,887	36,115	35,000
			1959/61	
d) *Schemes completed*				
14. Poultry Development D 4238 ...	6,458	294	6,752	—
15. Gozo Abattoir D 4234	—	324	324	—
16. Livestock Centre, Gozo D 4234 ...	1,210	—	1,210	—
17. Grinding Machinery Centre D 4234	1,694	—	1,694	—
18. Farm Machinery for Gozo D 4234	66	—	66	—
	9,428	618	10,046	—
vi) REVENUE				
VII. FEES OF OFFICE & REIMBURSEMENTS				
A. Fees of Office				
Veterinary Services				
32. Abattoir Fees...	19,217	17,108	17,544	18,500
Agriculture				
33. Licences, certificates, etc.	284	251	261	300
	19,501	17,359	17,805	18,800

	Actual 1959/60	Actual 1960/61	Actual 1961/62	Estimates 1962/63
B. REIMBURSEMENTS	£	£	£	£
Agriculture				
87. Sale of vegetables from Government farm	3,055	2,529	1,694	2,000
88. Sale of livestock from Government Farm	6,214	8,051	4,962	5,000
89. Sale of dairy produce	3,965	3,566	3,554	3,300
90. Sale of vine rootlings, etc., from vine nurseries	388	651	400	400
91. Sale of trees, plants, etc., from public plantations	1,167	1,145	1,649	1,000
92. Sale of fruit, etc., from San Anton Gardens	674	875	628	600
93. Sale of fruit, etc., from Buskett Gardens	1,233	2,117	1,575	2,000
94. Sale of fruit, etc., from Dar-il-Ljuni Gardens	102	120	118	100
95. Sale of hatching eggs and poultry Government Farm	4,810	7,526	7,784	9,000
96. Sale of honey	64	—	—	20
97. Inspection of Agricultural produce	1,186	849	561	1,000
98. Sale of wine	1,589	763	747	700
99. Service by skilled personnel of the Department on behalf of third parties	7,931	7,373	4,439	11,000
Veterinary Services				
100. Maintenance of dogs kept under observation...	83	45	67	100
101. Sale of Vaccine & Sera	86	—	—	—
Miscellaneous Reimbursements				
109. Miscellaneous	2,729	489	620	1,000
	35,276	36,099	28,798	37,220
XIII. INTEREST				
5. Interest on loans	1,790	1,403	1,667	1,800
XIV. WIDOWS & ORPHANS PENSION ACT 1927				
1. Contributions	828	815	853	900
XVII. MISCELLANEOUS RECEIPTS				
2. Miscellaneous	2,023	974	1,819	1,000
5. Repayment of Loans	—	3,821	11,829	15,000
	2,023	4,795	13,648	16,000
Total Revenue	59,418	60,471	62,771	74,720